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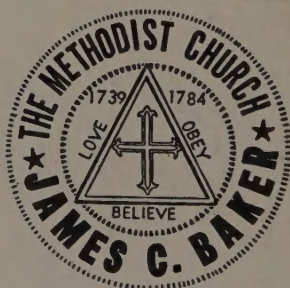


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THE

BIOGRAPHICAL

HISTORY OF PHILOSOPHY,

FROM ITS ORIGIN IN GREECE DOWN TO
THE PRESENT DAY.

BY

GEORGE HENRY LEWES.

"Man is not born to solve the mystery of Existence ; but he must nevertheless attempt it.
in order that he may learn how to keep within the limits of the Knowable."—GOETHE.

"For I doubt not through the ages one increasing purpose runs,
And the thoughts of men are widened by the process of the suns."

TENNYSON.

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SCHOOL OF THEOLOGY
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PART II.
MODERN PHILOSOPHY.

TRANSITION PERIOD.

FROM PROCLUS TO BACON.

§ I. SCHOLASTICISM.

ALTHOUGH Modern Philosophy, rigorously defined, commences with Bacon and Descartes, from whom a distinct development is traceable, such as the purpose of this History requires, we must not pass from Proclus to Bacon without at least a rapid glance at the course of speculative activity during the intervening twelve centuries. Mediæval Philosophy has been much decried and much exalted, but very little studied. So vast a subject demands a patience and erudition few can bring to it. Fortunately for me, whose knowledge of Scholasticism is limited to a superficial acquaintance with some of the works of Aquinas, Abelard, and Averroes, the nature of this History excludes any detailed examination of mediæval speculations. Consulting my own resources and the reader's interest, I find that the whole career of philosophic inquiry, from Proclus to Bacon, can be presented in three typical figures: namely, ABELARD, as representing Scholasticism; ALGAZZĀLI, as representing Arabian philosophy; and GIORDANO BRUNO, as representing the philosophic struggle which overthrew the authority of Aristotle and the Church. These three thinkers I have studied more or less in their own writings; and the reader will understand, therefore, that the following sketch is wholly drawn from second-hand knowledge in all but these three instances.

With the Alexandrians, Philosophy, as we have seen, became absorbed in Religion. The Alexandrians were succeeded by the Christian Fathers, who of course made Philosophy the handmaid

to Religion—*ancilla Theologiæ*. The whole philosophic effort was to mediate between the dogmas of faith and the demands of reason. Scholasticism derives its name from the schools opened by Charlemagne for the prosecution of speculative studies, which were only prosecuted in those days by the clergy, they alone having leisure or inclination for such work. Thus did the Monasteries form the cradle of Modern Philosophy.*

As far as we can separate the philosophic from the theological element, it displays itself in three capital manifestations: 1st, The debate on Universals; 2d, The influence of the Arabians, especially in their introduction of the works of Aristotle; and 3d, The rebellion against Aristotle and all other authority, in the proclamation of the independence of Reason.

There was no separation at all until the ninth century, when, in the person of Scotus Erigena, Philosophy timidly claimed its privilege. And even Scotus Erigena said, "There are not two studies, one of philosophy and one of religion; true philosophy is true religion, and true religion is true philosophy." In the eleventh century appeared Roscellinus, who, in advocating the philosophic doctrine of Nominalism, not only separated Philosophy from Religion, but placed it in direct antagonism with the fundamental dogma of the Trinity. To understand this we must remember that in those days there was a profound and even servile submission to the double authority of the Church and the Greek Philosophers,—a submission necessarily resulting from the teaching of the Fathers, who always combined the two. The works of Greek Philosophers were, however, but scantily known through Latin translations and commentaries; but this perhaps increased the eagerness to know them; and thus all doctrine be-

* Victor Cousin, *Hist. de la Phil.* ii. 9ème Leçon. The various historians of Philosophy, especially Ritter and Tennemann, should be consulted; but the clearest and most readable work known to me is M. Rousselot's *Etudes sur la Philosophie dans le Moyen Age*, 3 vols. 8vo. Paris, 1840. M. Rémusat's *Abélard*, 2 vols. Paris, 1845, by its analysis of Abelard's works, gives also a very good idea of Scholastic speculation.

came, in fact, erudition. To interpret Aristotle was to establish philosophy. It is a common error to suppose that Aristotle at once and always reigned despotically over the philosophy of the Middle Ages. As M. Rousselot* remarks, there were two distinct characters in Aristotle then accepted: there was first the Logician, whose word was law,—*magister dixit*,—whose *Organon* was the Bible of the schools,—whose authority no one thought of questioning; and there was also the Metaphysician, who, so far from receiving the worship offered to the Logician, was persecuted, excommunicated, and burned, because his metaphysical doctrine was thought to contain the fatal heresy of the unity of substance.† It was not until after Abelard, and owing to the Arabian influence, that Aristotle passed—to use M. Rémusat's happy phrase—from the consulship to the dictatorship of Philosophy.‡

Plato taught Realism. He maintained the existence of Abstract Ideas, as Objects or Substances. Aristotle, on the contrary, taught that Abstract Ideas were nothing but abstractions; general *names*, not general *things*. Early Scholasticism adopted Realism; and when Roscellinus by subtle argumentation proved that genera and species were nothing more than logical constructions, general terms, *flatus vocis*, without corresponding essences, it was soon evident that he was in antagonism with the dogma of the Trinity. "That Universal which you call Trinity cannot exist; and as the relations which unite these three divine persons do not exist, the Trinity cannot exist. There is either one God or three; if there is but one, he exists in a single person; if there are three, there are three beings separate, distinct."

The consequence of such heresy may be foreseen. Roscellinus was summoned before the Council of Soissons, and there forced

* *Etudes sur la Philos.* i. 173.

† Jourdain, in his erudite work, *Recherches sur l'âge et l'origine des Traductions d'Aristote*, has placed this condemnation of Aristotle beyond a doubt.

‡ *Abelard*, i. 316.

publicly to recant. He escaped to England, and perished in exile; but the seed he had sown fructified, and Nominalism afterwards became the reigning doctrine. The amount of verbal quibbling and idle distinctions employed on this famous question is only greater than that employed on other questions, because of its greater importance. No one can form an adequate idea of the frivolity and wearisome prolixity of these Schoolmen without opening one of their books; and even after having done so, it will remain incomprehensible how sane and earnest intellects could have contented themselves with such grinding of the air in metaphysic mills, unless we understand the error which misled them. The error was in mistaking logical constructions for truths, believing ideas to be the correlates of things, so that whatever was discernible in the mental combination was necessarily true of external facts. The Schoolmen analyzed the elements of speech and thought with the pertinacious eagerness now employed by chemists in analyzing the elements of bodies. This error is the fundamental error, *principium et fons*, of all metaphysical speculation; and with an ill grace do metaphysicians ridicule the follies of the Schoolmen, who only carried to excess the metaphysical Method of *unverified Deduction*. It may be true that Scholastic philosophy was for the most part a dispute about words, but it is not for metaphysicians to cast the reproach; and the defenders of Scholasticism have an easy task when they undertake to show that beneath these verbal disputes lay the deepest problems of Ontology.

§ II. LIFE OF ABELARD.

The name of Abelard has been immortalized by association with that of a noble woman. It is because Heloise loved him, that posterity feels interested in him. M. Michelet indeed thinks that to Abelard she owes her fame: "without his misfortunes she would have remained obscure, unheard of;" and in one sense this is true; but true it also is that, without her love, Abelard would have long ago ceased to inspire any interest; for his was

essentially a shallow, selfish nature. His popularity was rapid, loud, and scandalous. He was fitted for it, lived for it. But many a greater name has faded from the memories of men; many a once noisy reputation fails to awaken a single echo in posterity. Apart from the consecration of passion and misfortune, there is little in his life to excite our sympathy. Viewed in connection with Heloise he must always interest us; viewed away from her, he presents the figure of a quick, vivacious, unscrupulous, intensely vain Frenchman. But, in several respects, he represents the philosophic struggle of the twelfth century; and in this light we may consider him.

He was born in Brittany in 1079, of a noble family, named Bérenger. The name of Abelard came to him later. His master laughingly noticed his superficial manner of passing over some studies, filled as he was with others, and said, "When a dog is well filled, he can do no more than lick the bacon." The word to *lick*, in the corrupt Latin of that day, was *bajare*, and *Bajolardus* became the cognomen of this "bacon-licking student" among his comrades, which he converted into *Habelardus*, "se vantant ainsi de posséder ce qu'on l'accusait de ne pouvoir prendre."* In the ancient writers the name is variously spelled, as Abailardus, Abaielardus, Abaulardus, Abbajalarius, Baalaurdus, Belardus, and in French as Abeillard, Abayelard, Abalard, Abaulard, Abaalary, Allebart, Abulard, Beillard, Baillard, Balard, and even Esbaillart; which variations seem to imply that the old French writers were as accurate in their spelling of proper names as their descendants are in their use of English and German names.

Abelard's father joined to his knightly accomplishments a taste for literature, as literature was then understood; and this taste

* *Abélard*, par M. Charles de Rémusat, Paris 1845, p. 13. This valuable monograph contains the fullest biography of Abelard and the best analysis of his works yet published. Indeed, before M. Cousin published the works of Abelard, in 1836, every account of the philosophy of this thinker was necessarily meagre and erroneous.

became so dominant in the mind of the youth, that he renounced the career of arms altogether for that of learning. Dialectics was the great science of that day, almost rivalling in importance the Theology which it served and disturbed by turns. It was an exercise of intellectual ingenuity, for which this youth manifested surprising aptitude. He travelled through various provinces disputing with all comers, like a knight-errant of philosophy, urged thereto by the goading desire of notoriety. This love of notoriety was his curse through life. At the age of twenty he came to Paris, hoping there to find a fitting opportunity of display—an arena for his powers as a disputant. He attended the lectures of William de Champeaux, the most renowned master of disputation, to whom students flocked from all the cities of Europe. The new pupil soon excited attention. The beauty of his person, the easy grace of his manner, his marvellous aptitude for learning, and still more marvellous facility of expression, soon distinguished him from the rest. The master grew proud of his pupil, loved him through his pride, and doubtless looked on him as a successor. But it soon became evident that the pupil, so quick at learning, did not sit there merely to learn; he was waiting for some good opportunity of display, waiting to attack his venerable master, whose secret strength and weakness he had discovered. The opportunity came; he rose up, and in the midst of all the students provoked William de Champeaux to discussion, harassed, and finally vanquished him. Rage and astonishment agitated the students; rage and terror the master. The students were indignant because they clearly saw Abelard's motive.

Abelard dates the origin of all his woes from this occasion, when he created enmities which pursued him through life; and, with a sophistication common to such natures, he attributes the enmities to envy at his ability, instead of to the real causes, namely, his inordinate vanity and selfishness. For a time, indeed, the rupture with his master seemed successful. Although only two-and-twenty years of age, he established a school of Philos-

ophy at Melun, which became numerous attended, and spread his name far and wide. Emboldened by success, he removed his school still nearer to Paris—to Corbeil—in order, as he frankly tells us, that he might be more importunate to his old master. But his rival was still powerful, aged in science and respect. Intense application was necessary, and in the struggle Abelard's overtaken energies gave way. He was commanded by the physicians to shut up his school, and retire into the country for repose and fresh air.

In two years he returned to Paris, and saw with delight that his reputation had not been weakened by absence, but that on the contrary his scholars were more eager than ever. His old antagonist, William de Champeaux, had renounced the world, and retired to a cloister, where he opened the school of Saint Victor, afterwards so celebrated. His great reputation, although suffering from Abelard's attacks, drew crowds. One day, when the audience was most numerous, he was startled by the appearance of Abelard among the students, come, as he said, to learn rhetoric. William was troubled, but continued his lecture. Abelard was silent until the question of "Universals" was brought forward, and then suddenly changing from a disciple to an antagonist, he harassed the old man with such rapidity and unexpectedness of assault, that William confessed himself defeated, and retracted his opinion. That retraction was the death of his influence. His audience rapidly dwindled. No one would listen to the minor points of Dialectics from one who confessed himself beaten on the cardinal point of all. The disciples passed over to the victor. When the combat is fierce between two lordly stags, the hinds stand quietly by, watching the issue of the contest, and if their former lord and master, once followed and respected, is worsted, they all without hesitation pass over to the conqueror, and henceforth follow him. Abelard's school became acknowledged as pre-eminent; and, as if to give his triumph greater emphasis, the professor to whom William de Champeaux had resigned his chair, was either so intimidated by Abelard's

audacity, or so subjugated by his ability, that he offered his chair to Abelard, and ranged himself among the disciples.

Abelard was not content even with this victory. Although undisputed master in Dialectics, he could not hear of any other teacher without envy. A certain Anselm taught Theology at Laon with immense success; and this was enough to trouble Abelard's repose; accordingly to Laon he went, ridiculed Anselm's style, laughed at the puerile admiration of the scholars, and offered to surpass the master in the explanation of Scripture. The scholars first laughed, then listened, and admired. Abelard departed, having excited anarchy in the school, and anguish in the heart of the old man.

His career, at this period, was brilliant. His reputation had risen above that of every living man. His eloquence and subtlety charmed hundreds of serious students, who thronged beneath the shadows of the Cathedral in ceaseless disputation, thinking more of success in dispute than of the truths involved. M. Guizot estimates these students at not less than five thousand—of course not all at the same time. Amidst these crowds, Abelard might be seen moving with imposing haughtiness of carriage, not without the careless indolence which success had given; handsome, manly, gallant-looking, the object of incessant admiration. His songs were sung in the streets, his arguments were repeated in cloisters. The multitude reverentially made way for him, as he passed; and from behind their window-curtains peeped the curious eyes of women. His name was carried to every city in Europe. The Pope sent hearers to him. He reigned, and he reigned alone.*

It was at this period that the charms and helpless position of Heloise attracted his vanity and selfishness. He resolved to seduce her; resolved it, as he confesses, after mature deliberation. He thought she would be an easy victim; and he who had lived

* "Cum jam me solum in mundo superesse philosophum æstimarem."—*Epist.* i. p. 9.

in abhorrence of libertinage—*scortorum immunditiam semper abhorrebam*—felt that he had now attained such a position that he might indulge himself with impunity. We are not here attributing hypothetic scoundrelism to Abelard; we are but repeating his own statements. “I thought, too,” he adds, “that I should the more easily gain the girl’s consent, knowing as I did to how great a degree she both possessed learning and loved it.” He tells us how he “sought an opportunity of bringing her into familiar and daily intercourse with me, and so drawing her the more easily to consent to my wishes. With this view I made a proposal to her uncle, through certain of his friends, that he should receive me as an inmate of his house, which was very near to my school, on whatever terms of remuneration he chose; alleging as my reason that I found the care of a household an impediment to study, and its expense too burdensome.” The uncle, Fulbert, was prompted by avarice, and the prospect of gaining instruction for his niece, to consent. He committed her entirely to Abelard’s charge, “in order that whenever I should be at leisure from the school, whether by day or by night, I might take the trouble of instructing her; and should I find her negligent, use forcible compulsion. Hereupon I wondered at the man’s excessive simplicity, with no less amazement than if I had beheld him intrust a lamb to the care of a famishing wolf; for in thus placing the girl in my hands for me not only to teach, but to use forcible coercion, what did he do but give full liberty to my desires, and offer the opportunity, even had it not been sought, seeing that, should enticement fail, I might use threats and stripes in order to subdue her?”*

The crude brutality of this confession would induce us to suppose it was a specimen of that strange illusion which often makes reflective and analytic minds believe that their enthusiasms and passions were calculations, had we not sufficient evidence, throughout Abelard’s life, of his intense selfishness and voracious

* See *Epist.* i.

vanity. Whatever the motive, the incident is curious; history has no other such example of passionate devotion filling the mind of a woman for a dialectician. It was dialectics he taught her; since he could teach her nothing else. She was a much better scholar than he; in many respects better read. She was perfect mistress of Latin, and knew enough Greek and Hebrew to form the basis of her future proficiency. He knew nothing of Greek or Hebrew, although all his biographers, except M. Rémusat, assume that he knew them both; M. Michelet, even asserting that he was the only man who did then know them.* In the study of arid dialectics, then, must we imagine Abelard and Heloise thrown together; and, in the daily communion of their minds, passion ripened, steeped in that vague, dream-like, but intense delight, produced by the contact of great intelligences; and thus, as the Spanish translator of her letters says, “buscando siempre con pretexto del estudio los parages mas retirados”—they sought in the still air and countenance of delightful studies a solitude more exquisite than any society. “The books were open before us,” says Abelard, “but we talked more of love than philosophy, and kisses were more frequent than sentences.”†

In spite of the prudential necessity for keeping this intrigue secret, Abelard's truly French vanity overcame his prudence. He had written love-songs to Heloise; and with the egotism of a bad poet and indelicate lover, he was anxious for these songs to be read by other eyes besides those for whom they were composed; anxious that other men should know his conquest. His

* He knew a few terms current in the theological literature of the day, but had he known more, his ostentatious vanity would have exhibited the knowledge on all occasions. He expressly declares, moreover, that he was forced to read Greek authors in Latin versions. See Cousin's edition of the *Œuvres Inédites*, p. 43; also *Dialectica*, p. 200, where the non-existence of Latin versions is given as the reason of his ignorance of what Aristotle says in his *Physics* and *Metaphysics*.

† *Epist.* i. p. 11. He adds, with his usual crudity: “Et sæpius ad sinus quam ad libros reducebantur manus.” Madame Guizot excellently indicates the distinction between his sensual descriptions and the chaster, though more passionate, language of Heloise: “elle rappelle, mais ne détaille point.”

songs were soon bandied about the streets. All Paris was in the secret of his intrigue. That which a delicate lover, out of delicacy, and a sensible lover, out of prudence, would have hidden from the world, this coxcomb suffered to be profaned by being bawled from idle and indifferent mouths.*

At length even Fulbert became aware of what was passing under his roof. A separation took place; but the lovers continued to meet in secret. Heloise soon found herself pregnant, and Abelard arranged for her an escape to Brittany, where she resided with his sister, and gave birth to a son. When Fulbert heard of her flight, he was frantic with rage. Abelard came cringing to him, imploring pardon, recalling to him how the greatest men had been cast down by women, accused himself of treachery, and offered the reparation of marriage provided it were kept secret; because his marriage, if made known, would be an obstacle to his rising in the Church, and the mitre already glimmered before his ambitious eyes. Fulbert consented. But Heloise, with womanly self-abnegation, would not consent. She would not rob the world of its greatest luminary. "I should hate this marriage," she exclaimed, "because it would be an opprobrium and a calamity." She recalled to Abelard various passages in Scripture and ancient writers, in which wives are accursed, pointing out to him how impossible it would be for him to consecrate himself to philosophy unless he were free; how could he study amid the noises of children and domestic troubles of a household? how much more honorable it would be for her to sacrifice herself to him! She would be his concubine. The more she humiliated herself for him, the greater would be her claims upon his love; and thus she would be no obstacle to his advancement, no impediment to the free development of his genius.

* That this vanity and indelicacy are eminently French, though unhappily not exclusively French, will be admitted by all who are conversant with the life and literature of that remarkable people. It had not escaped the piercing gaze and healthy instincts of Molière, who has an admirable passage on this national peculiarity: see Arnolphe's monologue, act. iii. scene iii. of *L'Ecole des Femmes*.

"I call God to witness," she wrote many years afterwards, "that if Augustus, the emperor of the world, had deemed me worthy of his hand, and would have given me the universe for a throne, the name of your concubine would have been more glorious to me than that of his empress: *carius mihi et dignius videretur tua dici meretrix quam illius imperatrix.*"

Gladly would Abelard have profited by this sublime passion; but he was a coward, and his heart trembled before Fulbert. He therefore endeavored to answer her arguments; and she, finding that his resolution was fixed—a resolution which he very characteristically calls a bit of stupidity, *meam stultitiam*—burst into tears, and consented to the marriage, which was performed with all secrecy. Fulbert and his servants, however, in violation of their oath, divulged the secret. Whereupon Heloise boldly denied that she was married. The scandal became great; but she persisted in her denials, and Fulbert drove her from the house with reproaches. Abelard removed her to the nunnery of Argenteuil, where she assumed the monastic dress, though without taking the veil. Abelard furtively visited her.* Meanwhile Fulbert's suspicions were roused, lest this seclusion in the nunnery should be but the first step to her taking the veil, and so ridding Abelard of all impediment. Those were violent and brutal times, but the vengeance of Fulbert startled even the Paris of those days with horror. With his friends and accomplices, he surprised Abelard sleeping, and there inflicted that atrocious mutilation, which Origen in a moment of religious frenzy inflicted on himself.

In shame and anguish Abelard sought the refuge of a cloister. He became a monk. But the intense selfishness of the man would not permit him to renounce the world without also forcing Heloise to renounce it. Obedient to his commands, she took the

* He adds "*Nosti . . . quid ibi tecum mea libidinis egerit intemperantia in quadam etiam parte ipsius refectorii. Nosti id impudentissime tunc actum esse in tam reverendo loco et summæ Virgini consecrato.*"—*Epist. v.* p. 69.

veil; thus once again sacrificing herself to him whom she had accepted as a husband with unselfish regret, and whom she abandoned in trembling, to devote herself henceforth without hope, without faith, without love, to her divine husband.

The gates of the convent closed forever on that noble woman whose story continues one of pure heroism to the last; but we cannot pause to narrate it here. With her disappearance, the great interest in Abelard disappears; we shall not therefore detail the various episodes of his subsequent career, taken up for the most part with quarrels—first with the monks, whose dissoluteness he reproved, next with theologians, whose hatred he roused by the “heresy” of reasoning. He was condemned publicly to retract; he was persecuted as a heretic; he had ventured to introduce Rationalism,—or the explanation of the dogmas of Faith by Reason,—and he suffered, as men always suffer for novelties of doctrine. He founded the convent of Paraclete, of which Heloise was the first abbess, and on the 21st of April, 1142, he expired, aged sixty-three. “Il vécut dans l’angoisse et mourut dans l’humiliation,” says M. de Rémusat, “mais il eut de la gloire et il fut aimé.”

§ III. PHILOSOPHY OF ABELARD.

It would not be difficult to fill a volume with the exposition of Abelard’s philosophy; indeed, in M. de Rémusat’s work a volume and a quarter are devoted to the subject without exhausting it. But the nature of this History, and the necessities of space, equally force us to be very brief. Abelard’s contributions to the development of speculation may all be reduced to two points: the question of Universals, and the systematic introduction of Reason as an independent element in theology, capable not only of explaining dogmas, but of giving dogmas of its own.

“The nature of genera and species has formed perhaps the longest and most animated, and certainly the most abstract controversy which has ever agitated the human mind,” says M. de Rémusat, who adds, “that it is also one which now seems the

least likely to have interested men so deeply." The same will, probably, one day be said of the question of Immaterialism and Materialism, a logomachy as great, as animated, and as remote from all practical results, as that of Universals, but which, from its supposed relation to religious truths, has been made the great controversy of the schools. In our day there are few speculators who do not believe that important religious principles are indissolubly connected with the doctrine of an immaterial principle superadded to, and in nowise identical with, the brain; and this in spite of the indisputable fact that the early Christian Fathers maintained the materiality not only of the soul, but of God himself;* in spite also of the many pious moderns of unimpeachable orthodoxy who held, and hold, the doctrines stigmatized as Materialism, and who think with Occam: "*Experimur enim quod intelligimus et volumus et nolumus, et similes actus in nobis habemus; sed quod illa sint e forma immateriali et incorruptibili non experimur, et omnis ratio ad hujus probationem assumpta assumit aliquod dubium.*"†

Although, therefore, the intense feeling stirred by the dispute respecting Universals appears incomprehensible to us, who consider the dispute to have been a logomachy, for the most part; we may render intelligible to ourselves how such a dispute came to be so important, by considering the importance now attached to the dispute respecting an "immaterial principle." Idle or important, it was *the* dispute of the Middle Ages; and M. Cousin is guilty of no exaggeration in saying "the whole Scholastic philosophy issued out of a phrase in Porphyry as interpreted by Boethius." Here is the passage: "*Intentio Porphyrii est in hoc opere facilem intellectum ad prædicamenta præparare, tractando*

* Tertullian wrote a work expressly to combat the immaterialism of Plato and Aristotle. One sentence will suffice to bear out what is said above respecting God: "*Quis autem negabit Deum esse corpus, etsi Deus spiritus?*" M. Guizot, in his *Leçons sur l'Hist. de la Civilisation en France*, and M. Rousselot's *Études sur la Philos. dans le Moyen Age*, will furnish the reader with other examples.

† We borrow the passage from Rousselot's *Études*, iii. 256.

de quinque rebus vel vocibus, genere scilicet, specie, differentia, proprio et accidenti; quorum cognitio valet ad prædicamentorum cognitionem.”* In the phrase *rebus vel vocibus* he was understood to signify that things and words were mutually convertible; to discourse of one or of the other was indifferent; and the question turned upon this point: Does the word Genus, or the word Species, represent an actual *something*, existing externally,—or is it a mere *name* which designates a certain collection of individuals? The former opinion was held until Roscellinus attacked it, and brought forward the heresy of Nominalism with such force of argument that, although the heresy was condemned, the logic forced its way; and Abelard, when he attacked the doctrine of Realism, taught by William de Champeaux, borrowed so much of the Nominalist argument that until quite recently he has been called a Nominalist himself. That he was not a pure Nominalist is now clear; and M. Rousselot has even made out an ingenious case for him as a Realist. But, in truth, he was entirely neither; he was something of both; he was a Conceptualist. The peculiarity of his doctrine consists in the distinction of Matter and Form applied to genus and species. “Every individual,” he says in a very explicit passage of the treatise *De Generibus et Speciebus*, printed by M. Cousin, “is composed of matter and form, *i. e.* Socrates from the matter of Man, and the form of Socrativity; so Plato is of the same matter, namely that of man, but of different form, namely that of Platonity; and so of all other individual men. And just as the Socrativity which formally constitutes Socrates is nowhere but in Socrates, so the essence of man which sustains Socrativity in Socrates, is nowhere but in Socrates. The same of all other individuals. By species therefore I mean, not that essence of man which alone is in Socrates, or in any other individual, but, the whole collection which is formed of all the

* “The object of Porphyry in this work is to prepare the mind for the easy understanding of the Predicaments, by treating of the five things or words, namely, genus, species, difference, property, and accident; the knowledge of which leads to the knowledge of the Predicaments.”

individuals of the same nature. This whole collection, although essentially multiple, by the Authorities is named one Species, one Universal, one Nature; just as a nation, although composed of many persons, is called one. Thus each particular essence of the collection called Humanity is composed of matter and form, namely the animal is matter, the form is however not one, but many, *i. e.* rationality, morality, bipedality, and all the other substantial attributes. And that which is said of man, namely that the part of man which sustains Socrativity is not essentially the part which sustains Platonity, is true also of the Animal.* For the Animal which in me is the form of Humanity, cannot essentially be elsewhere; but there is in it something not different from the separate elements of individual animals. Hence, I call Genus the multitude of animal essences which sustain the individual species of Animal: the multitude diversified by that which forms Species. For this latter is only composed by a collection of essences which sustain individual forms; Genus, on the contrary, is composed by a collection of the substantial differences of different Species. . . . The particular essence which forms the Genus Animal, results from a certain matter, essence of body, and substantial forms, animation and sensibility†, which can only exist essentially there, although they take indifferently the forms of all species of body. This union of essences produces the universal named Animal Nature.”†

This passage will give the reader a taste of Abelard's quality when he is least tiresome from it we see clearly enough the kind of reality which he attributed to general terms, in opposition to the Nominalists, who taught that terms were *only* terms; he said they were terms which expressed *conceptions*, and these con-

* We must subjoin the original: “Et sicut de homine dictum est, scilicet quod illud hominis quod sustinet Socratitatem, illud essentialiter non sustinet Platonitatem, ita de animali. Nam illud animal quod formam humanitatis quæ in me est, sustinet, illud essentialiter alibi non est, sed illi non differens est et singulis materiis singulorum individuorum animalis.”

† *De Generibus et Speciebus*, p. 524.

ceptions were based on realities: as when a multitude is conceived under the form of unity, linking together all the actual resemblances existing between the individuals. This looks so very like Realism, that M. Rousselot may be pardoned for having argued at great length the paradoxical thesis of Abelard's being a Realist; but a closer examination of the treatise from which we have just cited a long passage, proves that Abelard did not deceive himself in maintaining the Realist doctrine to be erroneous from his point of view. He maintained that genus and species were not general essences existing essentially and integrally in the individuals, whose identity admitted of no other diversity than that of individual *modes*, or accidents; which was the doctrine of Realism; for, if this doctrine were true, the subject of these accidents, the substance of these modes being identical, every individual would possess the same substance, and humanity would only be one man; thus Socrates being at Athens, humanity would be at Athens; but Plato being at Thebes, humanity must then either not be at Athens, or Plato must not be humanity.

Let us quit here the question of Universals, to consider the second characteristic of Abelard's philosophy. It was he who gave the form if not the subject-matter of Scholasticism. It was he who brought Logic as an independent power into the arena of theological debate; a heresy which drew the terrors of the Church upon him: *Ponit in cælum os suum et scrutatur alta Dei*, said St. Bernard, writing to the Pope; and the same St. Bernard let fall the terrible accusation: "*transgreditur fines quos posuerunt patres nostri*—he has gone beyond the limits set by our forefathers!"—in all ages, in all nations, a mark of reprobation.

Supported, as he thought, by thousands of partisans, Abelard assumed an attitude of offence, almost of disdain. Unconscious of his real danger, he published the substance of his Lectures in a work called *Introductio ad Theologiam*, in which he undertook to demonstrate by Reason the dogmas of Faith, and promulgated

the then audacious opinion, that all dogmas should be presented under a rational form. That this was very far from being acceptable, may be read not only in his condemnation, but also in the passage of his *Dialectica*, where he says that his rivals declared it not permissible in a Christian to treat even of Dialectics, because Dialectics was not only incapable of instructing any one in the faith, but disturbed and destroyed faith by the complication of its arguments.*

This commencement, feeble though it may have been, marks a new epoch in the development of speculation. The struggle of Reason against Authority, which began with Abelard, has not yet terminated. "My disciples," he says in his Introduction, "asked me for arguments drawn from philosophy such as reason demanded, begging me to instruct them that they might understand, and not merely repeat what was taught them; since no one can believe any thing until he has first understood it; and it is ridiculous to preach to others what neither teacher nor pupil understand."

Not content with this revolutionary principle, Abelard further "transgressed the limits of his forefathers" by the composition of the treatise *Sic et Non*,† the object of which was to cite the passages of Scripture and the Fathers *pro* and *con.* upon every important topic: this collocation of contradictory statements given by the highest possible authorities was meant, as Abelard distinctly informs us, to train the mind to vigorous and healthy doubt, in fulfilment of the injunction, "Seek, and ye shall find; knock, and it shall be opened unto you." "Dubitando enim ad inquisitionem venimus; inquirendo veritatem percipimus; juxta quod et Veritas ipsa *Querite, inquit, invenietis; pulsate, et aperietur vobis.*"‡ Whatever his intention may have been, the re-

* *Dialectica*, p. 434.

† It is printed in Cousin's edition, but with omissions. The entire work was published in Germany, 1841, under this title: *Petri Abaelardi Sic et Non; primum integrum ediderunt E. L. Henke et G. S. Lindenkohl.*

‡ Page 17 of the edition just named.

sult of such a work was clearly foreseen by theological teachers, who regarded doubt as damnable, and would not tolerate it under the plausible aspects of intellectual gymnastics, or the love of seeking for truth. But theologians were unable to arrest the development of speculation. Doubt began; disputation waxed stronger; logic played like lambent flame around the most sacred subjects; Scholasticism entered every city in Europe, and filled it with subtle disputants.

During the centuries which succeeded, the question of Nominalism was constantly in debate; and besides it many others so remote, and, to modern apprehensions, so frivolous, that few historians boast of more than superficial acquaintance with mediæval philosophy, and few mention it without scorn. To name but one topic, what does the reader think of a debate, *utrum Deus intelligat omnia alia a se per ideas eorum, an aliter?* What does he think of men wasting their energies in trying to convince each other of the true process by which God conceived ideas—discussing, with ardor and unmisgiving ingenuity, topics which are necessarily beyond all possible demonstration? Nevertheless, absurd as such discussions were, they have found, even in modern times, legitimate successors; and the laborious futility of the Schoolmen has been rivalled by the laborious futility of the German metaphysicians.

We are not here to follow step by step the long course of mediæval speculation, but may pass at once to the Arabian Philosophy as illustrated in Algazzālī.

§ III. ALGAZZALI.

In our ignorance of Arabian history, it would be presumptuous to assert that, until the Greeks became known to them, the Arabs had no philosophy at all of their own; but whatever they may have had, we are only repeating their own avowal in asserting, that after their acquaintance with the Grecian systems, all philosophical energy was devoted to the mastery and development of those systems. The history of their philosophy is divided into

two parts: the first comprising the period of ancient thinkers, the Greeks; the second comprising the efforts of the Mussulman schools. The Greek schools were divided into two series, those which preceded and those which succeeded Aristotle.* In the first series there is scarcely a name familiar to our ears which was not familiar to the Arabian philosophers, Orpheus and Homer included. The Seven Sages are constantly alluded to. Thales, Anaximenes, Heraclitus, in short all the great thinkers, are expounded and commented on, not, according to M. Schmölders, with any historical or critical accuracy, but at any rate sufficiently to show their acquaintance with Greek books. In the series succeeding Aristotle they are more at home. They translated every work they could procure, and studied with servile ingenuity to appropriate all the doctrines of the Stagirite. Thus it is that Arabian Philosophy lies *beside* the sphere of European development; although the Arabians played an important part in the development of European culture during the Middle Ages, and Averroes and Avicenna were long regarded as *magistri*, no sooner did Europe possess the originals from which the Arabs learned, than they neglected these interpreters, and interpreted for themselves.

The work which will form the basis of the present Section is one which has the attraction of being entirely *original*—the history of a mind developing amid Arabian influences, and not the mere reflex of Grecian thought. It is probably owing to the originality of this treatise that it was never translated during the Middle Ages, the translators of those days caring only for Greek Philosophy; and thus, in spite of the high reputation of Algazzālī, the work was a closed book to all but Arabian scholars, until 1842, when a learned German reprinted it with a translation into French.†

Algazzālī, the Light of Islam and Pillar of the Mosque, who

* Schmölders, *Essai sur les Ecoles Philosophiques chez les Arabes*, p. 96.

† *Essai sur les Ecoles Philosophiques chez les Arabes*. Par M. Schmölders. Paris, 1842. From my notice of this work in the *Edinburgh Review*, April, 1847, I have incorporated many passages in the present Section.

under the names of Gazzali, Ghazali, and Algazel is frequently mentioned by writers on Arabian Philosophy, and was at one time made familiar to Europe by the attacks of his adversary Averroes, was born in the city of Tous, A. D. 1508. He was named Aboû Hâmed Mohammed, and his father was a dealer in cotton-thread (*gazzāl*), from whence he drew his name. Losing his father in early life, he was confided to the care of a Soufi. The nearest approach to what is meant by a Soufi, is what we mean by Mystic. The influence of this Soufi was great. No sooner had the youth finished his studies, than he was appointed professor of theology at Bagdad, where his eloquence achieved such splendid success that all the Imams became his eager partisans. So great was the admiration he inspired, that the Musulman sometimes said, "If all Islam were destroyed, it would be but a slight loss, provided Algazzālī's work on the 'Revivification of the Sciences of Religion' were preserved." It is this work which M. Schmölders has translated. It bears so remarkable a resemblance to the *Discours sur la Méthode* of Descartes, that, had any translation of it existed in the days of Descartes, every one would have cried out against the plagiarism.

Like Descartes, he begins with describing how he had in vain interrogated every sect for an answer to the mysterious problems which "disturbed him with a sense of things unknown;" and how he finally resolved to discard all authority, and detach himself from the opinions which had been instilled into him during the unsuspecting years of childhood. "I said to myself," he proceeds, "My aim is simply to know the truth of things; consequently it is indispensable for me to ascertain what is *knowledge*. Now, it was evident to me that *certain knowledge* must be that which explains the object to be known, in such a manner that no doubt can remain, so that in future all error and conjecture respecting it must be impossible. Not only would the understanding then need no efforts to be convinced of certitude, but security against error is in such close connection with knowledge, that even were an apparent proof of its falsehood to be

brought forward, it would cause no doubt, because no suspicion of error would be possible. Thus, when I have acknowledged ten to be more than three, if any one were to say, 'On the contrary, three is more than ten; and to prove the truth of my assertion, I will change this rod into a serpent:' and if he *were* to change it, my conviction of his error would remain unshaken. His manœuvre would only produce in me admiration for his ability. I should not doubt my own knowledge.

"Then was I convinced that knowledge which I did not possess in this manner, and respecting which I had not this certainty, could inspire me with neither confidence nor assurance; and no knowledge without assurance deserves the name of knowledge.

"Having examined the state of my own knowledge, I found it divested of all that could be said to have these qualities, unless perceptions of the senses and irrefragable principles were to be considered such. I then said to myself, Now having fallen into this despair, the only hope remaining of acquiring incontestable convictions is by the perception of the senses, and by necessary truths. *Their* evidence seemed to me indubitable. I began, however, to examine the objects of sensation and speculation, to see if they could possibly admit of doubt. Then doubts crowded upon me in such numbers that my incertitude became complete. Whence results the confidence I have in sensible things? The strongest of all our senses is sight; and yet, looking at a shadow and perceiving it to be fixed and immovable, we judge it to be deprived of movement; nevertheless, experience teaches us that, when we return to the same place an hour after, the shadow is displaced; for it does not vanish suddenly, but gradually, little by little, so as never to be at rest. If we look at the stars, they seem as small as money-pieces; but mathematical proofs convince us they are larger than the earth. These and other things are judged by the senses, but rejected by reason as false. I abandoned the senses, therefore, having seen all my confidence in their truth shaken.

"Perhaps," said I, "there is no assurance but in the notions of Reason: that is to say, first principles, *e. g.* ten is more than three; the same thing cannot have been created and yet have existed from all eternity; to exist and not to exist at the same time is impossible.

"Upon this the senses replied: What assurance have you that your confidence in Reason is not of the same nature as your confidence in us? When you relied on us, Reason stepped in and gave us the lie; had not Reason been there, you would have continued to rely on us. Well, may there not exist some other judge superior to Reason, who, if he appeared, would refute the judgments of Reason in the same way that Reason refuted us? The non-appearance of such a judge is no proof of his non-existence."

These skeptical arguments Algazzālī borrowed from the Grecian skeptics, and having borrowed them, he likewise borrowed from Grecian mystics, of the Alexandrian school, the means of escape from skepticism. He looked upon life as a dream.

"I strove in vain to answer the objections. And my difficulties increased when I came to reflect upon sleep. I said to myself, During sleep you give to visions a reality and consistence, and you have no suspicion of their untruth. On awakening, you are made aware that they were nothing but visions. What assurance have you, that all you feel and know when awake, does actually exist? It is all true as respects your condition at that moment; but it is, nevertheless, possible that another condition should present itself, which should be to your awakened state that which your awakened state now is to your sleep; so that, in respect to this higher condition, your waking is but sleep."

If such a superior condition be granted, Algazzālī asks whether we can ever attain to participation in it. He suspects that the *Ecstasy* described by the Soufis must be the very condition. But he finds himself philosophically unable to escape the consequences of skepticism: the skeptical arguments could only be refuted by demonstrations; but demonstrations themselves must

be founded on first principles; if *they* are uncertain, no demonstration can be certain.

"I was thus forced to return to the admission of intellectual notions as the basis of all certitude. This, however, was *not by systematic reasoning and accumulation of proofs, but by a flash of light which God sent into my soul*. For whoever imagines that *truth can only be rendered evident by proofs*, places narrow limits to the wide compassion of the Creator."

Thus we see Algazzālī eluding skepticism just as the Alexandrians eluded it, taking refuge in faith. He then cast his eyes on the various sects of the faithful, whom he ranged under four classes:

I. The *Dogmatists*: those who ground their doctrine wholly upon reason.

II. The *Bastīnīs*, or *Allegorists*: those who receive their doctrine from an Imam, and believe themselves sole possessors of truth.

III. The *Philosophers*: those who call themselves masters of Logic and Demonstration.

IV. The *Soufis*: those who claim an *immediate intuition*, by which they perceive the real manifestations of truth as ordinary men perceive material phenomena.

These schools he resolved thoroughly to question. In the writings of the Dogmatists he acknowledged that their aim was realized; but their aim was not his aim: "Their aim," he says, "is the preservation of the Faith from the alterations introduced by heretics." But his object was philosophical, not theological; so he turned from the Dogmatists to the Philosophers, studying their works with intense ardor, convinced that he could not refute them until he had thoroughly understood them. He did refute them, entirely to his satisfaction;* and having done so, turned to the Soufis, in whose writings he found a doctrine which required the union of action with speculation, in which virtue was

* In the ninth volume of the works of Averroes there is a treatise by Algazzālī, *Destructio Philosophorum*, which contains his refutation of the philosophical schools.

a guide to knowledge. The aim of the Soufis was to free the mind from earthly considerations, to purify it from all passions, to leave it only God as an object of meditation. The highest truths were not to be reached by *study*, but by *transport*—by a transformation of the soul during *ecstasy*. There is the same difference between this higher order of truth and ordinary science, as between being healthy and knowing the definition of health. To reach this state, it was necessary first to purify the soul from all earthly desires, to extirpate from it all attachment to the world, and humbly direct the thoughts to our eternal home.

“Reflecting on my situation, I found myself bound to this world by a thousand ties, temptations assailing me on all sides. I then examined my actions. The best were those relating to instruction and education; and even there I saw myself given up to unimportant sciences, all useless in another world. Reflecting on the aim of my teaching, I found it was not pure in the sight of the Lord. I saw that all my efforts were directed towards the acquisition of glory to myself.”

Thus did Philosophy lead him to a speculative Asceticism, which calamity was shortly afterwards to transform into practical Asceticism. One day, as he was about to lecture to a throng of admiring auditors, his tongue refused utterance: he was dumb. This seemed to him a visitation of God, a rebuke to his vanity, which deeply afflicted him. He lost his appetite; he was fast sinking; physicians declared his recovery hopeless, unless he could shake off the sadness which depressed him. He sought refuge in contemplation of the Deity.

“Having distributed my wealth, I left Bagdad and retired into Syria, where I remained two years in solitary struggle with my soul, combating my passions and exercising myself in the purification of my heart, and in preparation for the other world.”

He visited Jerusalem, and made a pilgrimage to Mecca, but at length returned to Bagdad, urged thereto by “private affairs” and the requests of his children, as he says, but more probably urged

thereto by his sense of failure, for he confesses not to have reached the *ecstatic* stage. Occasional glimpses were all he could attain, isolated moments of exaltation passing quickly away.

"Nevertheless, I did not despair of finally attaining this state. Every time that any accident turned me from it, I endeavored quickly to re-enter it. In this condition I remained ten years. In my solitude there were revelations made to me which it is impossible for me to describe, or even indicate. Enough if, for the reader's profit, I declare that the conviction was forced upon me that the Soufis indubitably walked in the true paths of salvation. Their way of life is the most beautiful, and their morals the purest that can be conceived."

The first condition of Soufi purification is, that the novice purge his heart of all that is not God. Prayers are the means. The object is *absorption in the Deity*.

"From the very first, Soufis have such astonishing revelations that they are enabled, while waking, to see visions of angels and the souls of the prophets; they hear their voices, and receive their favors. Afterwards a transport exalts them beyond the mere perception of forms, to a degree which exceeds all expression, and concerning which we cannot speak without employing language that would sound blasphemous. In fact, some have gone so far as to imagine themselves to be *amalgamated with God*, others *identified with him*, and others to be *associated with him*.* All these are sinful."

Algazzālī refuses to enter more minutely into this subject; he contents himself with the assertion that whoso knows not Ecstasy knows prophetism only by name. And what is *Prophetism*? The fourth stage in intellectual development. The first, or infantile stage, is that of pure Sensation; the second, which begins at the age of seven, is that of Understanding; the third is Reason, by means of which the intellect perceives the necessary, the possible, the absolute, and all those higher objects which transcend

* How characteristic this is of mysticism in all ages may be seen in the delightful *Hours with the Mystics*, by Mr. R. A. Vaughan.

the Understanding.* After this comes the fourth stage, when another eye is opened, by which man perceives things hidden from others—perceives all that will be—perceives things that escape the perceptions of Reason, as the objects of Reason escape the Understanding, and as the objects of Understanding escape the sensitive faculty. This is Prophetism. Algazzäli undertakes to prove the existence of this faculty :

“Doubts respecting Prophetism must refer either to its possibility or its reality. To prove its possibility it is only necessary to prove that it belongs to the category of objects which cannot be regarded as the products of intelligence : such, for example, as Astronomy or Medicine. For whoso studies these sciences is aware that they cannot be comprehended except by Divine inspiration, with the assistance of God, and not by experience. Since there are astronomical indications which only appear once in a thousand years, how could they be known by experience? From this argument it is evident that it is very possible to perceive things which the intelligence cannot conceive. And this is precisely one of the properties of Prophetism, which has a myriad other properties; but these others are only perceptible during ecstasy by those who lead the life of the Soufis.”

We are now in a position to judge of Soufism, which was not, strictly speaking, a Philosophy, nor was it a Religion. No Musulman, according to M. Schmölders, ever regarded it as either. It was simply a rule of life, carried into practice by a body of men, similar to what in Europe would have been a monastic order. The aim of Algazzäli's treatise was something more than the mere inculcation of Soufism, it was the endeavor to supply a *philosophical basis* for the rule of life; in other words, an attempt to reconcile Religion with Philosophy, or Philosophy with Religion; precisely analogous to that attempt which constitutes the whole philosophic activity of Scholasticism. There were two great epochs in the intellectual development of the Arabians: the

* Kant's three psychological elements, *Sinnlichkeit*, *Verstand*, *Vernunft*, are here anticipated.

preaching of Mahomet, and the conquest of Alexandria: the one gave them a Religion, the other gave them a Philosophy. The doctrines of the Koran were blended with those of the Neo-Platonists, and the result was that system of speculation known as Arabian Philosophy; a system different in its details, but similar in spirit and purpose to that known as Scholasticism, which blended the doctrines of Christianity with those of Grecian speculators.

§ IV. REVIVAL OF LEARNING.

However similar in spirit, Scholasticism could of course only accept, from the Arabian Philosophy, that portion which was derived from Greece, since Christianity necessarily replaced the Mahometan element. Europe was indebted to the Arabs for most of the principal works of Aristotle; and although it has long been the cue of historians and critics to speak contemptuously of the Arabian translations—a contempt perfectly impartial, seeing that the critics could read no Arabic—we are assured by M. Schmölders that these translations were very careful, and critical. Through the schools of Cordoba, Seville, Toledo, Valencia, Murcia, and Almeria, the Greek writers penetrated everywhere.

With the revival of learning, after the fall of Constantinople came fresh streams of Grecian influence. The works of Plato became generally known; under Marsilio Ficino—to whom we owe the Latin translation of Plato*—a school of Platonists was formed, which continued to divide, with the school of Aristotle, the supremacy of Europe, under new forms, as before it had divided it under the form of Realism. The effect of this influx of Grecian influence, at a period when Philosophy was just emancipating itself from the absolute authority of the Church, and proclaiming the divine right of Reason to be heard on all rational topics, was to transfer the allegiance from the Church to Antiquity. To have suddenly cast off all authority would have been too violent a

* In many respects our best guide to Plato's meaning where he is most obscure. It is printed in Bekker's edition.

change; and it may on the whole be regarded as fortunate for human development that Philosophy did so blindly accept the new authority—one altogether *human*, yet without deep roots in the life of the nation, without any external constituted power, consequently very liable to disunion and disruption, and certain to give way before the necessary insurgence of Reason insisting on freedom.

There is something profoundly significant in the principle of Authority, when not exercised despotically, and something essentially anarchical in the principle of Liberty of Thought, when not restrained within due limits. Both Authority and Liberty are necessary principles, which only in misuse become paralyzing or destructive. It may be made perfectly clear to the rational mind that there can be no such thing as "liberty of private judgment" in Mathematics, Astronomy, Physics, Chemistry, or any other science the truths of which have been established; the person ignorant of these sciences does, and must, take upon trust the statements made by those who are authorities; he cannot indulge his "private judgment" on the matter, without forfeiting the respect of those who hear him. Does this mean that all men are bound blindly to accept what astronomers and chemists assert? No; to require such submission of the judgment, is to pass beyond the principle of Authority, and assume that of Despotism. The principle of Liberty assures entire freedom to intellectual activity, warrants the control of Authority, incites men to control it by submitting its positions to those elementary tests by which it was itself originally constituted. If I have made a series of experiments which have led to the disclosure of an important truth, your liberty of private judgment is mere anarchy if it assert itself in denying the truth simply out of your own preconceptions; but it is healthy freedom if it assert itself in denying the truth after having submitted my authority to its original tests (those experiments, namely, which gave it authority), and after detecting some error in my experimentation, or some inaccuracy in my induction. The authoritative statement of Sir Charles Bell, repeated by every

other anatomist, respecting the separate functions of the anterior and posterior columns of the spinal chord, was one which permitted no liberty of private judgment, but did permit liberty of private verification; and when M. Brown-Séguard repeated the original experiments and proved the former conclusions to be erroneous,* his authoritative statement replaced that of previous anatomists, and will continue to replace it, until it has undergone a similar defeat through the process of verification.

If this is a correct view, it will enable us to understand the long continuance of Aristotle's authority, which coerced the minds of men as the authority of one confessedly a master in his art, and one whose positions would not easily be brought to the test of verification. Hence, as Bayle says, the method employed was first to prove every thesis by authority, and next by arguments; the proofs by authority were passages of Aristotle: the arguments went to show that these passages, rightly interpreted, meant what the thesis meant.

Other causes contributed to foster this reverence for Authority; only one cause could effectually destroy it, and that was the rise of positive Science, which by forcing men to verify every step they took, led them into direct antagonism with the ancients, and made them choose between the new truth and the old dogma. As Campanella—one of the reforming thinkers—acutely saw, “the reforms already made in philosophy must make us expect its complete change; and whoever denies that the Christian mind will surpass the Pagan mind, must also deny the existence of the New World, the planets and the stars, the seas, the animals, the colonies, and the modern sects of the new cosmography.”† It does not come within our purpose here to trace the rise and development of Science; we must therefore pass at once to Giordano Bruno, whom we have selected as the type or the philosophical insurgents against the authority of Aristotle and the Church.

* See *Mémoires de la Société de Biologie*, 1855.

† Quoted by M. Renouvier, *Manuel de Philos. Moderne*, p. 7.

§ V. GIORDANO BRUNO.*

On the 17th of February, 1600, a vast concourse of people was assembled in the largest open space in Rome, gathered together by the irresistible sympathy which men always feel with whatever is terrible and tragic in human existence. In the centre stood a huge pile of fagots; from out its logs and branches rose a stake. Crowding round the pile were eager and expectant faces, men of various ages and of various characters, but all for one moment united in a common feeling of malignant triumph. Religion was about to be avenged: a heretic was coming to expiate on that spot the crime of open defiance to the dogmas proclaimed by the Church—the crime of teaching that the earth moved, and that there was an infinity of worlds: the scoundrel! the villain! the blasphemer! Among the crowd might be seen monks of every description, especially Dominicans, who were anxious to witness the punishment of an apostate from their order; wealthy citizens were jostling ragged beggars,—young and beauteous women, some of them with infants at their breasts, were talking with their husbands and fathers,—and playing about amidst the crowd, in all the heedlessness of childhood, were a number of boys, squeezing their way, and running up against scholars pale with study, and bearded soldiers glittering with steel.

Whom does the crowd await? Giordano Bruno—the poet, philosopher, and heretic—the teacher of Galileo's heresy—the friend of Sir Philip Sidney, and open antagonist of Aristotle. Questions pass rapidly to and fro among the crowd; exultation is on every face, mingled with intense curiosity. Grave men moralize on the power of Satan to pervert learning and talent to evil: Oh, my friends, let us beware!—let us beware of learning! let us beware of every thing! Bystanders shake significant heads. A hush comes over the crowd. The procession solemn-

* In this Section I have altered and abridged an essay of my own in the *British Quarterly Review*.

ly advances, the soldiers peremptorily clearing the way for it "Look, there he is—there, in the centre! How calm—how haughty and stubborn!" (women whisper, "How handsome!") His large eyes are turned towards us, serene, untroubled. His face is placid, though so pale. They offer him the crucifix; he turns aside his head—he *refuses to kiss it!* "The heretic!" They show him the image of Him who died upon the cross for the sake of the living truth—he refuses the symbol! A yell bursts from the multitude.

They chain him to the stake. He remains silent. Will he not pray for mercy? Will he not recant? Now the last hour is arrived—will he die in his obstinacy, when a little hypocrisy would save him from so much agony? It is even so: he is stubborn, unalterable. They light the fagots; the branches crackle; the flame ascends; the victim writhes—and now we see no more. The smoke envelops him; but not a prayer, not a plaint, not a single cry escapes him. In a little while the wind has scattered the ashes of Giordano Bruno.

The martyrdom of Bruno has preserved his name from falling into the same neglect as his writings. Most well-read men remember his name as that of one who, whatever his errors might have been, perished a victim of intolerance. But the extreme rarity of his works, aided by some other causes into which it is needless here to enter, has, until lately, kept even the most curious from forming any acquaintance with them. The rarity of the writings made them objects of bibliopolic luxury: they were the black swans of literature. Three hundred florins were paid for the *Spaccio*, in Holland, and thirty pounds in England. Jacobi's mystical friend, Hamann, searched Italy and Germany in vain for the dialogues *De la Causa* and *De l'Infinito*. But in 1830, Herr Wagner, after immense toil, brought out his valuable edition of the Italian works, and since then students have been able to form some idea of the Neapolitan thinker.*

* *Opere di Giordano Bruno, Nolano, ora per la prima volta raccolte e pubblicate da Adolfo Wagner.* 2 vols., Leipzig, 1850.

Giordano Bruno was born at Nola, in La Terra di Lavoro, a few miles from Naples, and midway between Vesuvius and the Mediterranean.* The date of his birth is fixed as 1550—that is to say, ten years after the death of Copernicus,—whose system he was to espouse with such ardor,—and ten years before the birth of our own illustrious Bacon. Tasso well says:

“La terra
Simili a sè gli abitator’ produce;”

and Bruno was a true Neapolitan child—as ardent as its volcanic soil, burning atmosphere, and dark thick wine (*mangia guerra*)—as capricious as its varied climate. There was a restless energy which fitted him to become the preacher of a new crusade—urging him to throw a haughty defiance in the face of every authority in every country,—an energy which closed his wild adventurous career at the stake lighted by the Inquisition. He was also distinguished by a rich fancy, a varied humor, and a chivalrous gallantry, which constantly remind us that the athlete is an Italian, and an Italian of the sixteenth century. Stern as was the struggle, he never allowed the grace of his nature to be vanquished by its vehemence. He went forth as a preacher; but it was a preacher young, handsome, gay, and worldly—as a poet, not as a fanatic.

The first thing we hear of him is the adoption of the Dominican’s frock. In spite of his ardent temperament, so full of vigorous life, he shuts himself up in a cloister,—allured, probably, by the very contrast which such a life offered to his own energetic character. Bruno in a cloister has but two courses open to him: either all that affluent energy will rush into some stern fanaticism, and, as in Loyola, find aliment in perpetual self-combat, and in bending the wills of others to his purposes; or else his restless spirit of inquiry, stimulated by avidity for glory, will startle and irritate his superiors. It was not long ere the course was decided.

* For the biographic details I am mainly indebted to the valuable work of M. Christian Bartholmess, entitled *Jordano Bruno*, 2 vols., Paris, 1848.

He began to doubt the mystery of transubstantiation. Nay more: he not only threw doubt upon the dogmas of the Church, he had also the audacity to attack the pillar of all faith, the great authority of the age—Aristotle himself. The natural consequences ensued—he was feared and persecuted. Unable to withstand his opponents, he fled. Casting aside the monkish robe, which clothed him in what he thought a falsehood, he fled from Italy at the very moment when Montaigne, having finished the first part of his immortal Essays, entered it, to pay a visit to the unhappy Tasso, then raving in an hospital.

Bruno was now an exile, but he was free; and the delight he felt at his release may be read in several passages of his writings, especially in the sonnet prefixed to *L'Infinito*:

“Uscito di prigione angusta e nera,
Ove tanti anni error stretto m' avvinse:
Quà lascio la catena, che mi cinse,
La man di mia nemica invida e fera,” etc.

He was thirty years of age when he began his adventurous course through Europe—to wage single-handed war against much of the falsehood, folly, and corruption of his epoch. Like his great prototype, Xenophanes, who wandered over Greece, a rhapsodist of philosophy, striving to awaken mankind to a recognition of the Deity whom they degraded by their dogmas, and like his own unhappy rivals, Campanella and Vanini, Bruno became the knight-errant of truth, ready to combat all comers in its cause. His life was a battle without a victory. Persecuted in one country, he fled to another—everywhere sowing the seeds of revolt, everywhere shaking the dynasty of received opinion. It was a strange time,—to every earnest man, a sad and almost hopeless time. The Church was in a pitiable condition—decaying from within, and attacked from without. The lower clergy were degraded by ignorance, indolence, and sensuality; the prelates, if more enlightened, were enlightened only as epicures and pedants, swearing by the Gods of Greece and Rome, and laboriously imitating the sonorous roll of Ciceronian periods. The Reformation

had startled the world, especially the ecclesiastical world. The Inquisition was vigilant and cruel; but among its very members were skeptics. Skepticism, with a polish of hypocrisy, was the general disease. It penetrated almost everywhere—from the cloister to the cardinal's palace. Skepticism, however, is only a transitory disease. Men *must* have convictions. Accordingly, in all ages, we see skepticism stimulating new reforms; and reformers were not wanting in the sixteenth century. Of the Lutheran movement it is needless here to speak. The sixteenth century marks its place in history as the century of revolutions: it not only broke the chain which bound Europe to Rome, it also broke the chain which bound philosophy to Scholasticism and Aristotle. It set human reason free; it proclaimed the liberty of thought and action. In the vanguard of its army, we see Telesio, Campanella, and Bruno, men who must always excite our admiration and our gratitude for their cause and for their courage. They fell fighting for freedom of thought and utterance—the victims of a fanaticism the more odious because it was not the rigor of belief, but of *pretended* belief. They fought in those early days of the great struggle between science and prejudice, when Galileo was a heretic, and when the implacable severity of dogmatism baptized in blood every new thought born into the world.

One spirit is common to all these reformers, however various their doctrines: that spirit is one of unhesitating opposition to the dominant authority. It is the crisis of the Middle Ages—the modern era dawns there. In the fifteenth century men were occupied with the newly awakened treasures of ancient learning: it was a century of erudition; the past was worshipped at the expense of the present. In art, in philosophy, and in religion, men sought to restore the splendors of an earlier time. Brunelleschi, Michael Angelo, Raphael, disdaining the types of Gothic art, strove to recall once more the classic type. Marsilio Ficino, Mirandola, Telesio, and Bruno, discarding the subtleties and disputes of Scholasticism, endeavored to reproduce Pythagoras,

Plato, and Plotinus. In religion, Luther and Calvin, avowedly rising against Papal corruptions, labored to restore the Church to its primitive simplicity. Thus the new era seemed retrograde. It is often so. The recurrence to an earlier time is the preparation for a future. We cannot leap far, leaping from the spot where we stand; we must step backwards a few paces to acquire momentum.

Giordano Bruno ceaselessly attacked Aristotle. In so doing he knew that he grappled with the Goliath of the Church. Aristotle was a synonym for reason. An anagram was made of his name, "Aristoteles: *iste sol erat.*" His logic and physics, together with the Ptolemaic system of astronomy, were then considered as inseparable portions of the Christian creed. In 1624—a quarter of a century after Bruno's martyrdom—the Parliament of Paris issued a decree banishing all who publicly maintained theses against Aristotle; and in 1629, at the urgent remonstrance of the Sorbonne, decreed that to contradict the principles of Aristotle was to contradict the Church! There is an anecdote recorded somewhere of a student, who, having detected spots in the sun, communicated his discovery to a worthy priest: "My son," replied the priest, "I have read Aristotle many times, and I assure you there is nothing of the kind mentioned by him. Go rest in peace; and be certain that the spots which you have seen are in your eyes, and not in the sun." When Ramus solicited the permission of Beza to teach in Geneva, he was told, "the Genovese have decreed once for all, that neither in logic, nor in any other branch of knowledge, will they depart from the opinions of Aristotle—*ne tantillum quidem ab Aristotelis sententiâ deflectere.*" It is well known that the Stagirite narrowly escaped being canonized as a Saint. Are you for or against Aristotle? was *the* question of philosophy; and the piquant aspect of this ἀριστοτελεσμαχία is the fact that both parties were often ignorant of the real opinions of the Stagirite; attributing to him indeed doctrines the very reverse of what a more ample knowledge of his writings has shown to have been his.

Bruno, as we said, took his stand opposite to the Aristotelians. Pythagoras, Plato, and Plotinus were his teachers. Something of temperament may have originated this; for Bruno undoubtedly belongs to that class of thinkers in whom logic is but the handmaid of Imagination and Fancy. To him the Aristotle of that age was antipathetic. The Aristotelians taught that the world was finite, and the heavens incorruptible. Bruno declared the world to be infinite, and subject to an eternal and universal revolution. The Aristotelians proclaimed the immobility of the earth: Bruno proclaimed its rotation. Such open dissidence could of course only enrage the party in power. It would have been sufficiently audacious to promulgate such absurdities—*horrenda prorsus absurdissima*—as the rotation of the earth; but to defy Aristotle and ridicule his logic, could only proceed from insanity, or impiety. So Bruno had to fly.

To Geneva he first directed his steps. But there the power which had proved stronger than the partisans of Servetus, was still dominant. He made his escape to Toulouse; there he raised a storm among the Aristotelians, such as compelled him to fly to Paris. Behold him then in Paris, the streets of which were still slippery with the blood of the Eve of St. Bartholomew. One expects to see him butchered without mercy; but, by some good fortune, he obtains the favor of Henry III., who not only permits him to lecture at the Sorbonne, but offers to admit him as a salaried professor, if Bruno will but attend Mass. Is it not strange that at a time when attendance at Mass was so serious a matter,—when the echoes of that lugubrious cry, *la Messe ou la mort!* which had resounded through those narrow murky streets, must have been still ringing in men's ears,—Bruno, in spite of his refusal, not only continued to lecture, but became exceedingly popular? Since Abelard had captivated the students of Paris with his facile eloquence and startling novelties, no teacher had been so enthusiastically received as Bruno. Young, handsome, eloquent, and facetious, he charmed by his manner no less than by his matter. Adopting by turns every form of address—rising

into the aerial altitudes of imagination, or descending into the kennel of obscenity and buffoonery—now grave, prophet-like, and impassioned—now fierce and controversial—now fanciful and humorous—he threw aside all the monotony of professional gravity, to speak to them as a man. He did not on this occasion venture openly to combat the prejudices and doctrines of the age; that was reserved for his second visit, after he had learned in England to speak as became a free and earnest man.

To England let us follow him. On the misty banks of our noble Thames, he was rudely initiated into the brutality of the English character; but he was amply compensated by his reception at the Court of Elizabeth, where a friendly welcome awaited all foreigners—especially Italians. Nor was his southern heart cold to the exquisite beauty and incomparable grace of our women. England was worth visiting; and he had reason to refer with pride to “questo paese Britannico a cui doviamo la fedeltà ed amore ospitale.” It was in England he published the greater part of his Italian works. It was here perhaps that the serenest part of his life was spent. Patronized by the Queen (“l'unica Diana qual è tra voi, qual che tra gli astri il sole,” as he calls her), he had the glory and the happiness to call Sir Philip Sidney friend.

In the high communion of noble minds, in the interchange of great thoughts and glorious aspirations, another than Bruno might have been content to leave the world and all its errors in peace; but he had that within him which would not suffer him to be at rest. He could not let the world wag on its way, content to smile on its errors. He had a mission—without the cant of a mission. He was a soldier, and had his battles to fight. In the society of Sir Philip Sidney, Sir Fulke Greville, Dyer, Harvey, and most probably of Antonio Perez and Shakspeare's Florio, Bruno *might* have discussed with calmness every question of philosophy,—that is, had he been of an epicurean turn—had he not been Bruno. As it was, lured by his passion for publicity—by

his vanity, no less than by his love of truth—he rushed into the arena,

“Confident as is the falcon’s flight.”

If we attribute to him motives not altogether pure—if we see as much ostentation as devotion in this conduct, let it be remembered, that in this life the great aims of humanity are worked out by *human* means, wherein the impure and selfish are as much vital elements as the noble. In the great mechanism there are numberless trivial wheels, and littleness is often the *accessory* spring of some heroic act. This is no concession to the school of Rochefoucauld. That school makes the great mistake of attributing the splendor of the sun to its spots,—of deriving the greatness of human nature from its littleness. A selfish impulse will often mingle with the unselfish impulses which prompt an heroic act. We have only to reflect on the numerous instances of selfish impulse *unaccompanied* by any heroism, to be assured that if selfishness and disinterestedness may be found conjoined in the mingled woof of human nature, it in nowise alters the fact of disinterestedness, it in nowise lessens the worthiness of heroism. What philosophy is that which sees *only* vanity in martyrdom, *only* love of applause in the daring proclamation of truth? Gold without dross is not to be found in the earth; but is it therefore copper?

Let us follow Bruno’s course with other feelings than those of a short-sighted philosophy. It was not very long after his arrival in England (1583), that Leicester, then Chancellor of Oxford, gave that splendid *fête* in honor of the County Palatine Albert de Lasco, of which the annals of Oxford and the works of Bruno have preserved some details. In those days a foreigner was “lionized” in a more grandiose style than modern Amphitryons attempt. It was not deemed sufficient to ask the illustrious stranger to “breakfast;” there were no “dinners” given in public, or at the club. The age of tournaments had passed away; but there were still the public discussions, which were a sort of passage-of-arms between the knights of intellect. And such a tourney had

Leicester prepared in honor of the Pole. Oxford called upon her doughty men to brighten up their arms,—that is to say, to shake the dust from their volumes of Aristotle,—and all comers were challenged. Bruno stepped into the arena. Oxford chose her best men to combat for Aristotle and Ptolemy. On that cause her existence seemed to depend. Her statutes declared that the Bachelors and Masters of Arts who did not faithfully follow Aristotle, were liable to a fine of five shillings for every point of divergence, or for every fault committed against the *Organon*. Bruno wittily called Oxford the *widow* of sound learning—“la vedova di buone lettere.”

The details of this “wit combat” are unknown to us. Bruno declares that fifteen times did he stop the mouth of his pitiable adversary, who could only reply by abuse.* But there is considerable *forfanterie* about the Neapolitan, and such statements must be received with caution. That he created a “sensation,” we have no doubt; but his doctrines were sufficiently startling. We also find him, on the strength of that success, soliciting permission of the Oxford Senate to profess openly. With his usual arrogance, he styles himself, in this address, as a “doctor of a more perfect theology, and professor of a purer wisdom,” than was there taught. Strange as it may appear, permission was granted; probably because he had the patronage of Elizabeth. He lectured on cosmology, and on the immortality of the soul: a doctrine which he maintained, not upon the principles of Aristotle, but upon those of the Neo-Platonists, who regarded this life as a brief struggle, a sort of agony of death, through which the soul must pass ere it attains to the splendor of existence in

* “Andate in Oxonia e fatevi raccontar le cose intravenute al Nolano quando pubblicamente disputò con que' dottori in teologia in presenza del Principe Alasco Polacco, et altri de la nobiltà inglese! Fatevi dire come si sapea rispondere a gli argomenti, come restò per quindici sillogismi quindici volte qual pulcino entro la stoppa quel povero dottor, che come il corifeo de l' accademia ne puosero avanti in questa grave occasione! Fatevi dire con quanta inciviltà e discortesia procedea quel porco, e con quanta pazienza et umanità quell' altro, che in fatto mostrava essere Napoletano nato et allevato sotto più benigno cielo!”—*La Cena de le Ceneri: Opp. Ital.* ii. 179.

the eternal and universal life. In the deep unquenchable desire which is within us to unite ourselves with God, and to quit this miserable sphere for the glorious regions of eternity, is the written conviction of our future existence. No doubt he preached this doctrine with stirring eloquence; but it must have sounded very heterodox in the ears of that wise conclave—styled by Bruno “a constellation of pedants, whose ignorance, presumption, and rustic rudeness would have exhausted the patience of Job”—and they soon put an end to his lectures.*

We have already intimated the protection which Elizabeth accorded him, and which he repaid by adulation, extravagant enough, but which was then the current style in speaking of royalty; and it should not be forgotten that this praise of a Protestant Queen was not among the least of his crimes in the eyes of his accusers. Still, even Elizabeth could not protect a heretic; and Bruno’s audacious eloquence roused such opposition, that he was forced to quit England. He returned to Paris, once more to court the favor of the *Quartier Latin*. He obtained permission to open a public disputation on the physics of Aristotle. For three successive days did this dispute continue, in which the great questions of nature, the universe, and the rotation of the earth, were discussed. Bruno had thrown aside the veil, and presented his opinions naked to the gaze. His impetuous onslaught upon established opinions, produced the natural result: he was forced again to fly.

We next find him in Germany, carrying the spirit of innovation into its august universities. In July, 1586, he matriculated as *theologicæ doctor Romanensis*, in the university of Marburg, in Hesse; but permission to teach philosophy was refused him *ob arduas causas*. Whereupon he insulted the Rector in his own house, created a disturbance, and insisted that his name should be struck off from the list of members of the University. He set off for Würtemberg. His reception in this centre of Luther-

* Vide *Cena de le Ceneri*.

anism was so gratifying, that he styled Würtemberg the Athens of Germany. "Your justice," he writes to the Senate, "has refused to listen to the insinuations circulated against my character and my opinions. You have, with admirable impartiality, permitted me to attack with vehemence that philosophy of Aristotle which you prize so highly." For two years did he teach there with noisy popularity, yet on the whole with tolerable prudence, in not speaking against the peculiar views of Lutheranism. He even undertook a defence of Satan; but whether in that spirit of pity which moved Burns, or whether in the spirit of buffoonery which delights to play with awful subjects, we have no means of ascertaining. He did not offend his audience, in whatever spirit he treated the subject.

Here, then, in Würtemberg, with admiring audiences and free scope for discussion, one might fancy he would be at rest. Why should he leave so enviable a position? Simply because he was not a man to rest in ease and quiet. He was possessed with the spirit of a reformer, and this urged him to carry his doctrines into other cities. Characteristic of his audacity is the next step he took. From Würtemberg he went to Prague; from the centre of Lutheranism to the centre of Catholicism! In this he had reckoned too much on his own powers. He met with neither sympathy nor support in Prague. He then passed on to Helmstadt, where his fame having preceded him, the Duke of Brunswick conferred upon him the honorable charge of educating the hereditary Duke. Here again, if he had consented to remain quiet, he might have been what the world calls "successful;" but he was troubled with convictions—things so impedimental to success!—and these drew down upon him a sentence of excommunication. He justified himself, indeed, and the sentence was removed; but he was not suffered to remain in Helmstadt; so he passed to Frankfort, and there in quiet, brief retirement, published three of his Latin works. Here a blank occurs in his annals. When next we hear of him he is at Padua.

After an absence of ten years, the wanderer returns to Italy.

In his restless course, he has traversed Switzerland, France, England, and Germany; his hand against every man, and every man's hand against him. Heretic and innovator, he has irritated the clergy without securing the protection of philosophers. He has sought no protection but that of truth. That now he should choose Padua above all places, must ever excite our astonishment. Padua, where Aristotle reigns supreme! Padua, which is overshadowed by Venice and the Inquisition! Was he weary of life, that he thus marched into the camp of his enemy? or did he rely on the force of his convictions and the vigor of his eloquence to triumph even in Padua? None can say. He came—he taught—he fled. Venice received him,—but it was in her terrible prison. Lovers of coincidences will find a piquant illustration in the fact, that at the very moment when Bruno was thrown into prison, Galileo opened his course of mathematics at Padua; and the six years in which Galileo occupied that mathematical chair, were the six years Bruno spent in miserable captivity.

Bruno's arrest was no sooner effected, than intimation of it was sent to the Grand Inquisitor San Severina, at Rome, who ordered that the prisoner should be sent to him, under escort, on the first opportunity. Thomas Morosini presented himself before the *Savi* of Venice, and demanded, in the name of his Eminence, that Bruno should be delivered up to him. "That man," said he, "is not only a heretic, but an heresiarch. He has written works in which he highly lauds the Queen of England and other heretical princes. He has written diverse things touching religion, which are contrary to the faith." The *Savi*, for some reason or other, declined to give up their prisoner, saying the matter was too important for them to take a sudden resolution. Was this mercy? Was it cruelty? In effect, it was cruelty; for Bruno languished six years in the prisons of Venice, and only quitted them to perish at the stake. Six long years of captivity—worse than any death. To one so ardent, solitude itself was punishment. He wanted to be among men, to combat, to argue, to live; and he was condemned to the fearful solitudes of that prison, without

books, without paper, without friends. Such was the repose which the weary wanderer found on his native soil.

His prison doors were at length opened, and he was removed to Rome, there to undergo a tedious and fruitless examination. Of what use was it to call upon him to retract his opinions? The attempt to convince him was more rational; but it failed. The tiresome debate was needlessly prolonged. Finding him insensible to their threats and to their logic, they brought him, on the 9th of February, to the palace of San Severino; and there, in the presence of the cardinals and most illustrious theologians, he was forced to kneel and receive the sentence of excommunication. That sentence passed, he was handed over to the secular authorities, with a recommendation of a "punishment as merciful as possible, and without effusion of blood"—the *ut quam clementissimè et citra, sanguinis effusionem puniretur*—the atrocious formula for burning alive.

Calm and dignified was the bearing of the victim during the whole of this scene. It impressed even his persecutors. On hearing his sentence, one phrase alone disturbed the unalterable serenity of his demeanor. Raising his head with haughty superiority, he said, "I suspect you pronounce this sentence with more fear than I receive it." A delay of one week was accorded to him, in the expectation that fear might force a retractation; but the week expired, and Bruno remained immovable. He perished at the stake; but he died in the martyr spirit, self-sustained and silent, welcoming death as the appointed passage to a higher life.

"Fendo i cieli e a l' infinito m' ergo."

Bruno perished, the victim of intolerance. It is impossible to read of such a punishment without strong indignation and disgust. There is, indeed, no page in the annals of mankind which we would more willingly blot out, than those upon which fanaticism has written its bloody history. Frivolous as have often been the pretexts for shedding blood, none are more abhorrent to us than those founded upon religious differences. Surely the

question of religion is awful enough in itself! Men have the deepest possible interest in ascertaining the truth of it; and if they cannot read the problem aright by the light of their own convictions, will it be made more legible by the light of an *auto-da-fé*? Tolerance is still far from being a general virtue; but what scenes of struggle, of violence, and of persecution, has the world passed through, before even the present modicum of tolerance could be gained! In the sixteenth century, free thought was a crime. The wisest men were bitterly intolerant; the mildest, cruel. Campanella tells us that he was fifty times imprisoned, and seven times put to the torture, for daring to think otherwise than those in power. It was, indeed, the age of persecution. That which made it so bloody, was the vehemence of the struggle between the old world and the new—between thought and established dogma—between science and tradition. In every part of Europe—in Rome itself—men uprose to utter their new doctrines, and to shake off the chains which enslaved human intellect. It was the first great crisis in modern history, and we read its progress by the bonfires lighted in every town. The glare of the stake reddened a sky illumined by the fair auroral light of Science.

Did Bruno deserve to die? According to the notions of that age, he certainly did; though historians have, singularly enough, puzzled themselves in the search after an adequate motive for so severe a punishment. He had praised heretical princes; he had reasoned philosophically on matters of faith—properly the subjects of theology; he had proclaimed liberty of thought, and investigation; he had disputed the infallibility of the Church in science; he had propagated such heresies as the rotation of the earth, and the infinity of worlds; he had refused to attend Mass; he had repeated many buffooneries then circulating, which threw contempt upon sacred things; finally, he had taught a system of Pantheism, which was altogether opposed to Christianity. He had done all this; and whoever knows the sixteenth century, will see that such an innovator had no chance of escape. Ac-

cordingly, the flames (as Scioppius sarcastically wrote in describing the execution to a friend) "carried him to those worlds which he imagined."

"As men die, so they walk among posterity," is the felicitous remark of Monckton Milnes; and Bruno, like many other men, is better remembered for his death than for any thing he did while living. The flames which consumed his body have embalmed his name. He knew it would be so—"La morte d' un secolo fa vivo in tutti gli altri."

Considered as a system of philosophy, we cannot hesitate in saying that Bruno's has only an historical, not an intrinsic value. Its condemnation is written in the fact of its neglect. But taken historically, his works are very curious, and still more so when we read them with a biographical interest; for they not only illustrate the epoch, but exhibit the man—exhibit his impetuosity, recklessness, vanity, imagination, buffoonery, his thoroughly Neapolitan character, and his sincere love of truth. Those who wish to see grave subjects treated with dignity, will object to the license he allows himself, and will have no tolerance for the bad taste he so often displays. But we should rather look upon these works as the rapid productions of a restless athlete—as the improvisations of a full, ardent, but irregular mind, in an age when taste was less fastidious than it has since become. If Bruno mingled buffooneries and obscenities with grave and weighty topics, he therein only follows the general license of that age; and we must extend to him the same forgiveness as to Bembo, Ariosto, Tansillo, and the rest. Plato himself is not wholly exempt from the same defect.

In adopting the form of dialogue, Bruno also followed the taste of his age. It is a form eminently suited to polemical subjects; and all his works were polemical. It enabled him to ridicule by turns the pedants, philosophers, and theologians; and to enunciate certain doctrines which even his temerity would have shrunk from, had he not been able to place them in the mouth of another. He makes his dialogues far more entertain-

ing than works of metaphysics usually are; and this he does by digressions, by ridicule, by eloquence, and a liberal introduction of sonnets. Sometimes his very vivacity becomes wearisome. The reader is stunned and bewildered by the remorseless torrent of substantives and epithets which pours from his too prolific pen. There is nobody to rival him, but Rabelais, in this flux of words.* His great butts are the clergy, and the philosophers. He reproaches the former with ignorance, avarice, hypocrisy, and the desire to stifle inquiry and prolong the reign of ignorance. The philosophers he reproaches with blind adherence to authority, with stupid reverence for Aristotle and Ptolemy, and with slavish imitation of antiquity. It should be observed that he does not so much decry Aristotle, as the idolatry of Aristotle.† Against the pedantry of that pedantic age he is always hurling his thunders. "If," says he, in one place, characterizing the pedant, "he laughs, he calls himself Democritus; if he weeps, it is with Heraclitus; when he argues, he is Aristotle; when he combines chimeras, he is Plato; when he stutters, he is Demosthenes." That Bruno's scorn sprang from no misology, his own varied erudition proves. But while *he* studied the ancients to extract from them such eternal truths as were buried amidst a mass of error, *they*, the pedants, only studied how to deck themselves in borrowed plumes.

Turning from manner to matter, we must assign to Bruno a place in the history of philosophy, as a successor of the Neo-Platonists, and the precursor of Spinoza, Descartes, Leibnitz, and

* To give the reader a taste of this quality, we will cite a sentence from the dedicatory epistle to *Gli Eroiici Furori*: "Che spettacolo, o Dio buono! più vile e ignobile può presentarsi ad un oocchio di terso sentimento, che un uomo cogitabundo, afflitto, tormentato, triste, maninconioso, per divenir or freddo, or caldo, or fervente, or tremante, or pallido, or rosso, or in mina di perplesso, or in atto di risoluto, un, che spende il miglior intervallo di tempo destillando l' elixir del cervello con mettere scritto e sigillar in pubblici monumenti, quelle continue torture, que' gravi tormenti, que' razionali discorsi, que' fatuosi pensieri, e quelli amarissimi studi, destinati sotto la tirannide d' una indegna imbecille stolta e sozza sporcizia?" Thus it continues for some fifty lines more!—*Opp. Ital.* ii. 299.

† Vide *Opp. Ital.* ii. 67, where this is explicitly stated.

Schelling. That Spinoza and Descartes were actually conversant with the writings of Giordano Bruno, does not distinctly appear. Yet it is not to be disputed that Bruno anticipated Spinoza in his conception of the *immanence* of the Deity, in his famous *natura naturans* and *natura naturata*, and in his pantheistic theory of evolution. He also anticipated Descartes' famous criterium of truth, viz. that whatever is clear and evident to the mind, and does not admit of contradiction, must be true; and in his proclamation of Doubt as opposed to Authority, he thus insists upon Doubt as the starting-point: "*Chi vuol perfettamente giudicare deve saper spogliarsi de la consuetudine di credere, deve l' una e l' altre contraddittoria esistimare egualmente possibile, e dismettere a fatto quell' affezione di cui è imbibeto da natività.*"* Leibnitz was avowedly acquainted with Bruno's works, and derived therefrom his theory of monads. Schelling makes no secret of his obligations.

There is another merit in Bruno which should not be overlooked, that, namely, of giving a strong impulse to the study of *Nature*. Occupied with Syllogisms about entities and quiddities, the philosophy of the Middle Ages had missed the great truth that "man is the minister and interpreter of nature." Philosophy taught that the interpretation could proceed only from *within*; that men were to look into their own minds to analyze, subdivide, and classify their own ideas, instead of looking forth into Nature, and patiently observing her processes.† Bruno was one of the first to call men out into the free air. With his poetical instinct, he naturally looked to Nature as the great book for man to read. He deified Nature; and looked upon the Universe as the garment of God, as the incarnation of the divine activity. Let not this be misunderstood, however. If Bruno embraced

* *De l' Infinito Universo e Mondi: Opp. Ital.* ii. 84.

† It is of them Telesio energetically says: "Sed veluti cum Deo de sapientiâ contententes decertantesque, mundi ipsius principia et causas ratione inquirere ausi, et quæ non invenerant, inventa ea sibi esse existimantes, volentesque, veluti suo arbitratu, mundum affluxere."—*De Rerum Naturâ in Proem.*

the Copernican theory, and combated the general physics of his day, he is not, on that account, to be mistaken for a man of scientific Method. He espoused the correct view of the earth's sphericity and rotation; but he did so on the faith of his metaphysical theories, not on rigorous induction.

Bruno's creed was Pantheism. God was the Infinite Intelligence, the Cause of Causes, the Principle of all life and mind; the great Activity, whose action we name the Universe. But God did not *create* the universe; he *informed* it with life—with being. He *is* the universe; but only as the cause is the effect, sustaining it, *causing* it, but not limited by it. He is self-existing, yet so essentially active as incessantly to manifest himself as a Cause. Between the supreme Being and the inferior beings dependent upon him, there is this distinction: He is absolutely simple, without parts. He is one whole, identical and universal; whereas the others are mere individual parts, distinct from the great Whole. Above and beyond the visible universe there is an Infinite Invisible,—an immovable, unalterable Identity, which rules over all diversity. This Being of Beings, this Unity of Unities, is God: “Deus est monadum monas, nempe entium entitas.”

Bruno says, that although it is impossible to conceive nature separated from God, we can conceive God separated from nature. The infinite Being is the essential centre and substance of the universe, but he is above the essence and substance of all things: he is *superessentialis*, *supersubstantialis*. Thus we cannot conceive a thought independent of a mind, but we can conceive a mind apart from any one thought. The universe is a thought of God's mind—nay more, it is the infinite activity of his mind. To suppose the world finite is to limit his power. “Wherefore should we imagine that the Divine activity (*la divina efficacia*) is idle? Wherefore should we say that the Divine goodness, which can communicate itself *ad infinitum*, and infinitely diffuse itself, is willing to restrict itself? Why should his infinite capacity be frustrated—defrauded of its possibility to create infinite

worlds? And why should we deface the excellence of the Divine image, which should rather reflect itself in an infinite mirror, as his nature is infinite and immense?"*

Bruno admits the existence of only one intelligence, and that is God. *Est Deus in nobis*. This intelligence, which is perfect in God, is less perfect in inferior spirits; still less so in man; more and more imperfect in the lower gradations of created beings. But all these differences are differences of degree, not of kind. The inferior order of beings do not understand themselves, but they have a sort of language. In the superior orders of beings, intelligence arrives at the point of self-consciousness—they understand themselves, and those below them. Man, who occupies the middle position in the hierarchy of creation, is capable of contemplating every phasis of life. He sees God above him—he sees around him traces of the divine activity. These traces, which attest the immutable order of the universe, constitute the soul of the world. To collect them, and connect them with the Being whence they issue, is the noblest function of the human mind. Bruno further teaches that, in proportion as man labors in this direction, he discovers that these traces, spread abroad in nature, do not differ from the *ideas* which exist in his own mind.† He thus arrives at the perception of the identity between the soul of the world, and his own soul, both as reflections of the Divine intelligence. He is thus led to perceive the identity of Subject and Object, of Thought and Being.

Such is the faint outline of a doctrine, to preach which, Bruno became a homeless wanderer and a martyr; as he loftily says, "Con questa filosofia l' anima mi s' aggrandisce, e mi si magnifica l' intelletto." If not original, this doctrine has at any rate the merit of poetical grandeur. In its deep thoughts, wrestling

* *De l' Infinito: Opp. Ital.* ii. 24.

† "ELP.: What is the purpose of the senses?—FIL.: Solely to excite the reason; to indicate the truth, but not to judge of it. Truth is in the sensible object as in a mirror; in the reason, as a matter of argument; in the intellect, as a principle and conclusion; but in the mind it has its true and proper form."—*De l' Infinito*, p. 18.

with imperfect language, do get some sort of utterance. As a system, it is more imaginative than logical; but to many minds it would be all the more acceptable on that account. Coleridge used to say, and with truth, that imagination was the greatest faculty of the philosopher; and Bruno said, "Philosophi sunt quodammodo pictores atque poetæ. . . . Non est philosophus nisi fingit et pingit." Little as the dull man of science may be aware of it, the great faculty of imagination is indispensable even to his science: it is the great telescope with which we look into the infinite. But in metaphysics imagination plays a still greater part: it there reigns as a queen.

The works of Bruno are mostly in Italian, Latin having been happily reserved by him for the logical treatises. The volumes which we owe to the honorable diligence and love of philosophy of Adolph Wagner, open with the comedy, *Il Candelajo*, which was adapted to the French stage under the title of *Boniface le Pédant*, from which Cyrano de Bergerac took his *Pédant Joué*,—a piece which in its turn was plundered by Molière, who, with charming wit and candor, avows it: "Ces deux scènes (in Cyrano) étaient bonnes; elles m'appartenaient de plein droit; on reprend son bien partout où on le trouve."* According to

* This is, perhaps, the wittiest of all the variations of the "pereant male qui ante nos nostra dixissent." The Chevalier D'Aceilly's version is worth citing:

"Dis-je quelque chose assez belle ?
L'antiquité tout en cervelle
Prétend l'avoir dite avant moi.
C'est une plaisante donzelle !
Que ne venait-elle après moi ?
J'aurais dit la chose avant elle !"

While on this subject, we cannot resist Piron's lines;

"Ils ont dit, il est vrai, presque tout ce qu'on pense.
Leurs écrits sont des vols qu'ils nous ont faits d'avance.
Mais le remède est simple; il faut faire comme eux,
Ils nous ont dérobés; dérobons nos neveux.
Un démon triomphant m'élève à cet emploi:
Malheur aux écrivains qui viendront après moi !"

La Metromanie.

Charles Nodier, Molière was indebted to Bruno for several scenes; but it is difficult to settle questions of plagiarism. Bruno's comedy is long, full of absurd incidents and Neapolitan buffoonery, and might have suggested a good deal to such a prolific mind as Molière's. In it he has exhibited "the amorousness of one old man named Bonifacio, the sordid avarice of another named Bartolomeo, and the pedantry, not less sordid, of a third named Manfurio." Ladies of vacillating virtue, soldiers, sailors, and scamps concert together to deceive these three old men, and wring money from their sensuality, their avarice, and their superstition. Bonifacio, desperately in love with Vittoria, is nevertheless alarmed at the enormous expense necessary to make his addresses acceptable. He had recourse to Scaramure, a reputed magician, who sells him a wax figure, which he is to melt, and thus melt the obdurate heart of his fair one. After a succession of disasters, Bonifacio is seized by pretended police, who force from him a heavy ransom. Bartolomeo becomes the dupe of Cencio, an impostor, who sells him a receipt for making gold. Manfurio, the pedant, is beaten, robbed, and ridiculed throughout. The sensualism and niggardliness of Bonifacio, and the pedantry of Manfurio, are hit off with true comic spirit; and the dialogue, though rambling and diffuse, is enlivened by *lazzi*—not always the most decent, it is true—and crowded with proverbs. Dramatic art there is none: the persons come on and talk; they are succeeded by fresh actors, who, having talked, also retire to give place to others. The whole play leaves a very confused impression. The hits at alchemy and pedantry were, doubtless, highly relished in those days.

It is very strange to pass from this comedy to the work which succeeds it in Wagner's edition, *La Cena de le Ceneri*. In five dialogues he combats the hypothesis of the world's immobility; proclaims the infinity of the universe, and warns us against seeking its centre or circumference. He enlarges on the difference between appearances and reality in celestial phenomena; argues that our globe is made of the same substance as the other plan-

ets, and that every thing which *is*, is living, so that the world may be likened to a huge animal.* In this work he also answers his objectors, who bring against his system the authority of Scripture, exactly in the same way as modern geologists answer the same objection, viz. by declaring that the revelation in the Bible was a moral not a physical revelation. It did not pretend to teach science, but, on the contrary, adopted ordinary notions, and expressed itself in the language intelligible to the vulgar.† In this work there are some digressions more than usually interesting to us, because they refer to the social condition of England during Elizabeth's reign.

The two works, *De la Causa* and *De l' Infinito*, contain the most matured and connected exposition of his philosophical opinions. As our space will not admit of an analysis, we must refer to that amply given by M. Bartholmess.‡ The *Spaccio de la Bestia Trionfante* is the most celebrated of all his writings. It was translated by Toland, in 1713, who printed only a very few copies, as if wishing it to fall into the hands of only a few choice readers. The very title has been a sad puzzle to the world, and has led to the strangest suppositions. The "Triumphant Beast," which Bruno undertakes to expel, is none other than this: ancient astronomy disfigured the heavens with animals as constellations, and under guise of expelling these, he attacks the great beast (superstition) whose predominance causes men to believe that the stars influence human affairs. In his *Cabala del Cavallo Pegaseo*, he sarcastically calls the ass "la bestia trionfante viva," and indites a sonnet in praise of that respectable quadruped:

* An idea borrowed from Plato, who, in the *Timæus*, says, ὅπως οὖν δὴ κατὰ λόγον τὸν εἰκότα δεῖ λέγειν τόνδε τὸν κόσμον ζῶον ἐμψυχον ἔννοον τε τῇ ἀληθείᾳ διὰ τὴν τοῦ θεοῦ γενέσθαι πρόνοιαν.—p. 26, ed. Bekker. Compare also *Politicus*, p. 278. Bruno may have taken this directly from Plato, or he might have learned it from the work of his countryman, Telesio, *De Rerum Naturâ*.

† "Secondo il senso volgare et ordinario modo di comprendere e parlare." The whole of the early portion of Dialogue 4 (in which this distinction is maintained) is worth consulting.—*Opere*, i. 172 sq.

‡ Vol. ii. pp. 128-154.

“ Oh sant' asinità, sant' ignoranza,
 Santa stoltizia, e pia divozione,
 Qual sola puoi far l' anima sì duone
 Ch' uman ingegno e studio non l'avanza !” etc.

The *Spaccio* is an attack upon the superstitions of the day,—a war against ignorance, and “that orthodoxy without morality, and without belief, which is the ruin of all justice and virtue.” Morality, Bruno fancifully calls “the astronomy of the heart;” but did not even Bacon call it “the *Georgics* of the mind?” The *Spaccio* is a strange medley of learning, imagination, and buffoonery; and on the whole, perhaps the most tiresome of all his writings. M. Bartholmess, whose admiration for Bruno greatly exceeds our own, says of it: “The mythology and symbolism of the ancients is there employed with as much tact as erudition. The fiction that the modern world is still governed by Jupiter and the court of Olympus, the mixture of reminiscences of chivalry, and the marvels of the middle ages, with the tales and traditions of antiquity—all those notions which have given birth to the philosophy of mythology, of religions, and of history—the Vicos and the Creuzers—this strange medley makes the *Spaccio* so interesting. The philosopher there speaks the noble language of a moralist. As each virtue in its turn appears to replace the vices which disfigure the heavens, it learns from Jupiter all it has to do, all it has to avoid: all its attributes are enumerated and explained, and mostly personified in the allegorical vein; all the dangers and excesses it is to avoid are characterized with the same vigor. Every page reveals a rare talent for psychological observation, a profound knowledge of the heart, and of contemporary society. The passions are subtly analyzed and well painted. That which still more captivates the thoughtful reader is the sustained style of his long fiction, which may be regarded as a sort of philosophic sermon. Truth and wisdom, justice and candor, take the place in the future now occupied by error, folly, and falsehood of every species. In this last respect the *Spaccio* has sometimes the style of the Apocalypse.”

Without impugning the justice of this criticism, we must add,

that the *Spaccio* taxes even a bookworm's patience, and ought to be read with a liberal license in skipping.

Perhaps of all his writings, *Gli Eroi Furori* is that which would most interest a modern reader, not curious about the philosophical speculations of the Neapolitan. Its prodigality of sonnets, and its mystic exaltation, carry us at once into the heart of that epoch of Italian culture when poetry and Plato were the great studies of earnest men. In it Bruno, avowing himself a disciple of Petrarch, proclaims a Donna more exalted than Laura, more adorable than all earthly beauty: that Donna is the imperishable image of Divine Perfection. It is unworthy of a man, he says, to languish for a woman; to sacrifice to her all those energies and faculties of a great soul, which might be devoted to the pursuit of the Divine. Wisdom, which is truth and beauty in one, is the idol adored by the genuine hero. Love woman if you will, but remember that you are also a lover of the Infinite. Truth is the food of every heroic soul; hunting for Truth the only occupation worthy of a hero.* The reader of Plato will trace here a favorite image; and was it not Berkeley who defined Truth as the cry of all, but the game few run down?

* *Vide*, in particular, the fine passage, *Opp. Ital.* ii. 406-7.

FIRST EPOCH.

FOUNDATION OF THE INDUCTIVE METHOD.

§ I. THE LIFE OF BACON.

FRANCIS BACON was born on the 22d January, 1561. Mr. Basil Montagu, the laborious and affectionate (we had almost said idolatrous) biographer of Bacon, wishes us to believe that the family was ancient and illustrious; and favors us with rhetorical flourishes about Bacon retiring to the "halls of his ancestors." This is somewhat different from the story of Bacon's grandfather having kept the sheep of the Abbot of Bury.*

But although we can claim for Bacon no illustrious ancestry, we must not forget his excellent parentage. His father, Sir Nicholas, was generally considered as ranking next to the great Burleigh as a statesman. His mother, Anne, daughter of Sir Anthony Cooke, "was distinguished both as a linguist and as a theologian. She corresponded in Greek with Bishop Jewel, and translated his *Apologia* from the Latin so correctly, that neither he nor Bishop Parker could suggest a single alteration."†

His health was very delicate, which made him sedentary and reflective. Of his youth we know little, but that little displays

* See this question of lineage, and a great many other curious points, satisfactorily settled in an article on the Lives of Bacon, *London Review*, Jan. 1836.

† *Edinb. Review*, July, 1837, p. 9. This is the brilliant article on Bacon, by Macaulay, which has excited so much attention. It is reprinted in his *Essays*.

the reflective tendency of his mind. At the age of twelve he discussed the point as to how a juggler could tell the card of which a man thought: he at first ascribed it to a confederacy between the juggler and the servants, till he at last discovered the law of the mind on which the trick depends. We hear also of his leaving his playfellows to examine the cause of an echo which he had observed in a vault. At thirteen he was entered at Trinity College, Cambridge, where he soon felt a profound contempt for the course of study pursued there, and an inveterate scorn for Aristotle and his followers. It is said that he there planned his *Novum Organum*; but this is highly improbable. What he did was perhaps to sketch some new scheme of philosophical study, originated by his contempt for that in vogue. There must however be a wide difference between the sketch of a boy, prompted by contempt for reigning opinions, and the wise maturity of his greatest work, the fruit of a life's meditations.

On leaving Cambridge, he visited Paris, Poitiers, and other parts of France, from whence he was recalled on the sudden death of his father. "Being returned from travaile," says Dr. Rowley, "he applyed himself to the study of the Common Law, which he took upon him to be his profession; in which he obtained to great excellency, though he made that (as himself said) but as an accessory, and not as his principal study."

In 1590, he sat in Parliament as Member for Middlesex. He soon became distinguished as an orator and as a debater. We have the testimony of an admirable judge to assure us that Bacon's oratory was worthy of his other powers. Ben Jonson thus writes: "There happened, in my time, one noble speaker, who was full of gravity in his speaking. His language, where he could spare or pass by a jest, was nobly censorious. No man ever spoke more neatly, more pressly, more weightily, or suffered less emptiness, less idleness, in what he uttered. No member of his speech but consisted of his own graces. His hearers could not cough or look aside from him without loss. He commanded

when he spoke, and had his judges angry or pleased at his devotion.”*

A grave biographical question, namely that of Bacon’s political and moral conduct, must be passed over by us without a word of comment, because the question is too complicated and critical for any succinct narrative.† Let us pass on to the year 1616, when Sir Francis Bacon was sworn of the Privy Council; and in March, 1617, on the retirement of Lord Brackley, was appointed Keeper of the Great Seal. His administration was any thing but pure. He was the tool of Buckingham, who was altogether unscrupulous. On his own account, too, he accepted large presents from persons engaged in Chancery suits. His enemies reckoned his gains in this way at a hundred thousand pounds: an immense sum in those days, and probably exaggerated. His works had spread his fame throughout Europe. He had also been created Baron Verulam; and subsequently Viscount St. Alban’s. We have every reason to believe that he valued this title more highly than that of the author of the *Instauratio Magna*; but, as Mr. Macaulay remarks, posterity, in defiance of royal letters-patent, has obstinately refused to degrade Francis Bacon into Viscount St. Alban’s.

In the height of this prosperity a terrible reverse was at hand. He was accused of corruption, and was impeached. His remorse and dejection of mind were dreadful. “During several days he remained in his bed, refusing to see any human being. He passionately told his attendants to leave him—to forget him—never again to name his name—never to remember that there had been such a man in the world.” The charges against him were such that the King, impotent to save him, advised him to

* Ben Jonson, *Underwoods*. In the *Discoveries*, Ben also speaks admiringly and affectionately of him.

† In the former edition, Mr. Macaulay’s view of this question was adopted; but on the eve of the appearance of that long-promised edition of Bacon’s works, in which Mr. Spedding is to give the results of his exhaustive study of this question, it seems desirable not to repeat statements which may turn out erroneous when all the evidence is produced.

plead guilty. He did so. The sentence he received was severe: a fine of forty thousand pounds, and to be imprisoned in the Tower during the King's pleasure. He was declared incapable of holding any office in the State, or of sitting in Parliament, and was banished for life from the verge of the Court.

This sentence was not executed. He was sent, indeed, to the Tower, but at the end of the second day he was released. His fine was remitted by the Crown. He was soon allowed to present himself at Court; and in 1624 the rest of his sentence was remitted. He was at liberty to sit in the House of Lords, and was summoned to the next Parliament. He did not, however, attend: age, infirmity, and perhaps shame, prevented him.

In his retirement, he devoted himself to literature; and amongst other works published his wonderful treatise *De Augmentis*, which, though only an expansion of his *Advancement of Learning*, may nevertheless be regarded as a new work.*

"The great apostle of experimental philosophy," says Mr. Ma-caulay, "was destined to be its martyr. It had occurred to him that snow might be used with advantage for the purpose of preventing animal substances from putrefying. On a very cold day, early in the spring of the year 1626, he alighted from his coach near Highgate, to try the experiment. He went into a cottage, bought a fowl, and with his own hands stuffed it with snow. While thus engaged, he felt a sudden chill, and was so much indisposed, that it was impossible for him to return to Gray's Inn. After an illness of about a week, he expired on the morning of Easter-day, 1626. His mind appears to have retained its strength and liveliness to the end. He did not forget the fowl which had caused his death. In the last letter that he ever wrote, with fingers which, as he said, could not steadily hold a pen, he did not omit to mention that the experiment of the snow had succeeded excellently well."

* "I find, upon comparison, that more than two-thirds of this treatise are a version, with slight interpolation or omission, from the *Advancement of Learning*, the remainder being new matter."—Hallam, *History of Literature of Europe*, iii. 169.

Bacon, when dying, did not disguise from himself the mournful fact, that if he had thought profoundly, he had acted unworthily. Knowing at once his errors and his greatness, he said, "For my name and memory, I leave it to men's charitable speeches, and to foreign nations, and to the next age." His confidence was well placed. Leniently as we cannot but think him to have been treated by his contemporaries, posterity has been still more gracious; and the reason is felicitously expressed by Macaulay: "Turn where we will, the trophies of that mighty intellect are full in view. *We are judging Manlius in sight of the Capitol.*"

§ BACON'S METHOD.

Bacon is commonly styled the Father of Experimental Philosophy. Was he the first great experimentalist? No. Was he the most successful experimentalist? No. Was he the discoverer of some of those great laws, the application of which is the occupation of succeeding generations—was he a Copernicus, a Galileo, a Kepler, a Torricelli, a Harvey, or a Newton? No.

He owes this title to his Method, as will be understood after the following sketch, in which we shall follow Professor Playfair's exposition in his *Dissertation on the Progress of Physical Science*, prefixed to the *Encyclopædia Britannica*.

Before laying down the rules of his Method, Bacon proceeds to enumerate the causes of error—the *Idols*, as he terms them, in his figurative language, or false divinities, to which the mind had so long been accustomed to bow.* He considered this enumeration as the more necessary, that the same idols were likely to return, even after the reformation of science.

These idols he divides into four classes, viz.:

Idola Tribus	Idols of the Tribe.
Idola Spectus	Idols of the Den.
Idola Fori	Idols of the Forum.
Idola Theatri	Idols of the Theatre.

* Mr. Hallam was the first to point out the mistake which all modern writers have made respecting the meaning of the word *Idol*, as used by Bacon; which does not mean *idol*, but *false appearance* (εἰδωλον). See the passage in Hallam's *Lit. of Europe*, iii. 194-6.

1. The *Idols of the Tribe* are the causes of error founded on human nature in general. "The mind," he observes, "is not like a plane mirror, which reflects the images of things exactly as they are; it is like a mirror of an uneven surface, which combines its own figure with the figures of the objects it represents."

Among the idols of this class, we may reckon the propensity which there is in all men to find a greater degree of order, simplicity, and regularity, than is actually indicated by observation. Thus, as soon as men perceived the orbits of the planets to return into themselves, they immediately supposed them to be perfect circles, and the motion in those circles to be uniform; and to these hypotheses the astronomers and mathematicians of all antiquity labored incessantly to reconcile their observations.

The propensity which Bacon has here characterized, may be called the *spirit of system*.

2. The *Idols of the Den* are those which spring from the peculiar character of the individual. Besides the causes of error common to all mankind, each individual has his own dark cavern, or den, into which the light is imperfectly admitted, and in the obscurity of which a tutelary idol lurks, at whose shrine the truth is often sacrificed.

Some minds are best adapted to mark the differences of things, others to catch at the resemblances of things. Steady and profound understandings are disposed to attend carefully, to proceed slowly, and to examine the most minute differences; while those that are sublime and active, are ready to lay hold of the slightest resemblances. Each of these easily runs into excess; the one by catching continually at distinctions, the other at affinities.

3. The *Idols of the Forum* are those which arise out of the intercourse of society, and those also which arise from language.

Men believe that their thoughts govern their words; but it also happens, by a certain kind of reaction, that their words frequently govern their thoughts. This is the more pernicious, that words, being generally the work of the multitude, divide

things according to the lines most conspicuous to vulgar apprehensions. Hence, when words are examined, few instances are found in which, if at all abstract, they convey ideas tolerably precise and defined.

4. The *Idols of the Theatre* are the deceptions which have arisen from the dogmas of different schools.

As many systems as existed, so many representations of imaginary worlds had been brought upon the stage. Hence the name of *Idola Theatri*. They do not enter the mind imperceptibly like the other three; a man must labor to acquire them, and they are often the result of great learning and study.

After these preliminary discussions, Bacon proceeds, in the Second Book of his *Organum*, to describe and exemplify the nature of induction.

The first object must be to prepare a history of the phenomena to be explained, *in all their modifications and varieties*. This history is to comprehend not only all such facts as spontaneously offer themselves, but all *the experiments instituted for the sake of discovery*, or for any of the purposes of the useful arts. It ought to be composed with great care; the facts accurately related and distinctly arranged; their authenticity diligently examined; those that rest on doubtful evidence, though not rejected, yet noted as uncertain, with the grounds of the judgment so formed. This last is very necessary, for facts often appear incredible only because we are ill-informed, and cease to appear marvellous when our knowledge is further extended. This record of facts is *Natural History*.

The Natural History being prepared of any class of phenomena, the next object is to discover, by a comparison of the different facts, the *cause* of these phenomena, or, as Bacon calls it, the *form*. The form of any quality in a body is something convertible with that quality; that is, where it exists the quality exists: thus, if transparency in bodies be the thing inquired after, the *form* of it is something found wherever there is transparency. Thus *form* differs from *cause* in this only: we call it form or es-

sence, when the effect is a permanent quality; we call it *cause*, when the effect is a change or an event.

Two other subjects, subordinate to *forms*, but often essential to the knowledge of them, are also occasionally subjects of investigation. These are the latent process, *latens processus*; and the latent schematism, *latens schematismus*. The former is the secret and invisible progress by which sensible changes are brought about, and seems, in Bacon's acceptation, to involve the principle since called the *law of continuity*, according to which no change, however small, can be effected but in *time*. To know the relation between the time and the change effected in it, would be to have a perfect knowledge of the latent process. In the firing of a cannon, for example, the succession of events during the short interval between the application of the match and the expulsion of the ball, constitutes a latent process of a very remarkable and complicated nature, which, however, we can now trace with some degree of accuracy.

The latent schematism is that invisible structure of bodies on which so many of their properties depend. When we inquire into the constitution of crystals, or into the internal structure of plants, etc., we are examining into the latent schematism.

In order to inquire into the form of any thing by induction, having brought together all the facts, we are to begin with considering what things are thereby *excluded* from the number of possible forms. This conclusion is the first part of the process of induction. Thus, if we are inquiring into the quality which is the cause of transparency in bodies; from the fact that the diamond is transparent, we immediately exclude rarity or porosity as well as fluidity from these causes, the diamond being a very solid and dense body.

Negative instances, or those where the *form* is wanting, to be also collected.

That glass when pounded is not transparent, is a negative fact, when the form of transparency is inquired into; also, that collections of vapors have not transparency. The facts thus col-

lected, both negative and affirmative, should, for the sake of reference, be reduced to tables.

Bacon exemplifies his Method on the subject of Heat; and though his collection of facts is imperfect, his method of treating them is extremely judicious,* and the whole disquisition highly interesting.

After a great many exclusions have been made, and left but few principles common to every case, one of these is to be assumed as the cause; and by reasoning from it synthetically, we are to try if it will account for the phenomena. So necessary did this exclusive process appear to Bacon, that he says, "It may, perhaps, be competent to angels or superior intelligences to determine the form or essence directly, by affirmations from the first consideration of the subject; but it is certainly beyond the power of man, to whom it is only given to proceed at first by negatives, and in the last place to end in *affirmatives*, after the exclusion of every thing else."

There is, however, great difference in the value of facts. Some of them show the thing sought for in the highest degree, some in the lowest; some exhibit it simple and uncombined, in others it appears confused with a variety of circumstances. Some facts are easily interpreted, others are very obscure, and are understood only in consequence of the light thrown on them by the former. This led Bacon to his consideration of *Prerogative Instances*, or the comparative value of facts as means of discovery. He enumerates twenty-seven different species: but we must content ourselves with giving only the most important.

I. *Instantiæ solitariæ*: which are either examples of the same quality existing in two bodies otherwise different, or of a quality differing in two bodies otherwise the same. In the first instance the bodies differ in all things but one; in the second they agree in all but one. Thus, if the cause or *form* of color be inquired

* This is Playfair's judgment; a different opinion will presently be quoted from John Mill.

into, *instantiæ solitariae* are found in crystals, prisms, drops of dew, which occasionally exhibit color, and yet have nothing in common with the stones, flowers, and metals which possess color permanently, except the color itself. Hence Bacon concludes that color is nothing else than a modification of the rays of light, produced in the first case by the different degrees of incidence; and second, by the texture or constitution of the surface of bodies. He may be considered as very fortunate in fixing on these examples, for it was by means of them that Newton afterwards found out the composition of light.

II. The *instantiæ migrantes* exhibit some property of the body passing from one condition to another, either from less to greater or from greater to less; arriving nearer perfection in the first case, or verging towards extinction in the second.

Suppose the thing inquired into were the cause of whiteness in bodies; an *instantia migrans* is found in glass, which entire is colorless, but pulverized becomes white. The same is the case with water unbroken or dashed into foam.

III. The *instantiæ ostensivæ* are the facts which show some particular property in its highest state of power and energy, when it is either freed from impediments which usually counteract it, or is itself of such force as entirely to repress those impediments.

If the weight of air were inquired into, the Torricellian experiment, or the barometer, affords an *ostensive instance*, where the circumstance which conceals the weight of the atmosphere in common cases, namely the pressure of it in all directions, being entirely removed, that weight produces its full effect, and sustains the whole column of mercury in the tube.

IV. The *instances* called *analogous* or *parallel* consist of facts between which a resemblance or analogy is visible in some particulars, notwithstanding great diversity in all the rest. Such are the telescope and microscope compared to the eye. It was the experiment of the camera obscura which led to the discovery of the formation of images of external objects in the bottom of

the eye by the action of the crystalline lens, and other humors of which the eye is formed.

V. *Instantiæ comitatûs* : examples of certain qualities which always accompany one another. Such are flame and heat : flame being always accompanied by heat, and the same degree of heat in a given substance being always accompanied with flame.

Hostile instances, or those of perpetual separation, are the reverse of the former. Thus transparency and malleability in solids are never combined.

VI. The *instantia crucis*. When in any investigation the understanding is placed in *æquilibrio*, as it were, between two or more causes, each of which accounts equally well for the appearances as far as they are known, nothing remains to be done, but to look out for a fact which can be explained by one of these causes and not by the other. Such facts perform the office of a cross, erected at the separation of two roads, to direct the traveler which to take : hence called *crucial instances*.

The *experimentum crucis* is of such weight in matters of induction, that in all those branches of science where it cannot be resorted to (an experiment being out of our power and incapable of being varied at pleasure) there is often a great want of conclusive evidence.

§ III. THE SPIRIT OF BACON'S METHOD.

We may now resume the question of Bacon's claim to the title of Father of Experimental Science. That which distinguishes his conception of philosophy from all previous conceptions is the systematization of graduated Verification, as the sole Method of research. Others before him, notably Albertus Magnus, had insisted on some parts of the experimental Method ; his great predecessor and namesake, Roger Bacon, had, in the *Opus Majus*, insisted on experience as the truest guide, and had distributed the causes of error under four heads (Authority, Custom, Vulgar Prejudice, and False Science), but no one had coordinated into a compact body of doctrine all the elements of

the Inductive Method; and it is in this co-ordination that Bacon's great merit lies. Roger Bacon had said that "experience alone gives accurate knowledge. Reasoning concludes, but establishes nothing; even mathematical demonstration gives no complete and certain conviction without this sanction. But this experimental science is entirely unknown to the many. It has three grand prerogatives relatively to the other kinds of knowledge. The first is, that experiment proves and verifies by its investigations the highest propositions which the other sciences can present. The second is, that this method, which alone merits the name of *mistress of speculative knowledge*, can alone attain to those sublime truths which other sciences cannot reach; in experimental truths the mind must not seek for the reason of things before the testimony of facts, nor reject those facts because it cannot justify them by argument. The third prerogative is so peculiar to this method that it is independent of its relations with the others: it consists in two points, namely, in the knowledge of the future, the present, and the past, and in the admirable operations in which it surpasses judicial astrology."* Many—from Socrates downwards—had insisted on Induction; but the Induction they conceived was that which Bacon calls *inductio per enumerationem simplicem*, and which consists in "ascribing the character of general truths to all propositions which are true in every instance that we happen to know of:" an induction perpetually made in the loose latitude of common talk, and in the less pardonable laxity of common literature. It is the *natural and instinctive* action of the mind, and is thus distinguished from the *circumspect* Method of Science. The real merit of Bacon's conception was his accurate detection of this natural source of

* This passage, translated from M. Rousselot's *Etudes*, iii. 189, is not properly Bacon's, but an abstract of the doctrines developed and exemplified in the sixth part of the *Opus Majus*, pp. 445-477 of the London edition, 1783. The four causes of error are mentioned in p. 2 of the same edition: "Fragilis et indignæ auctoritatis exemplum, consuetudinis diuturnitas, vulgi sensus imperiti, et propriæ ignorantie occultatio cum ostentatione sapientiæ apparentis."

error, and his insistence on the wider and more circumspect Method of Verification.

He did not content himself with telling men to make observations and experiments: he told them *how* observations and experiments ought to be made. He did not content himself with stating the proper mode of investigation to be that of Induction founded upon facts: he distinguished proper from improper inductions—the “interrogation” from the “anticipation” of Nature.

He did this, and he did more. His Method may be said to have two parts: the one, that precise system of rules we have just quoted; the other, that wise and pre-eminently scientific spirit which breathes through his works. The latter is expressed in wise and weighty aphorisms which form perpetual texts for philosophic writers, and reveal the magnificence and profundity of his intellect. It is in these he shows how completely he saw through the false methods of his day, and how justly he is entitled the Father of Positive Science.

These aphorisms form, as we have said, perpetual texts. They are quoted on all occasions when Method is treated of. We cannot however resist quoting a half-dozen of them here, because of their exceeding value, and of their fitness as illustrations of his greatness:

I. Man, the minister and interpreter of Nature, can act and understand in as far as he has, either in fact or in thought, observed the order of Nature; more he can neither know nor do.

II. The real cause and root of almost all the evils in science is this: *that, falsely magnifying and extolling the powers of the mind*, we seek not its real helps.

III. There are two ways of searching after and discovering truth: the one, from sense and particulars, rises directly to the most general axioms, and resting upon these principles, and their unshaken truth, finds out intermediate axioms, and this is the method in use; but the other raises axioms from sense and particulars *by a continued and gradual ascent*, till at last it arrives

at the most general axioms, which is the true way, but hitherto untried.

IV. The understanding, when left to itself, takes the first of these ways; for the mind *delights in springing up to the most general axioms, that it may find rest*; but after a short stay there, *it disdains experience*, and these mischiefs are at length increased by logic, for the ostentation of disputes.

V. The natural human reasoning we, for the sake of clearness, call the anticipation of nature, as being a rash and hasty thing; and the reason duly exercised upon objects, we call the interpretation of nature.

VI. It is false to assert that human sense is the measure of things, since all perceptions, both of sense and mind, are *with relation to man, and not with relation to the universe*;* but the human understanding is like an unequal mirror to the rays of things, which, *mixing its own nature with the nature of things, distorts and perverts them*.

We need only consider these half-dozen aphorisms to see the *positive* tendency of his speculations; and the greater the attention we bestow on his writings, the more is this fact pressed on our notice. His mind was antipathetic to all metaphysics. Neither the ingenuities of logicians, nor the passionate earnestness of theologians, in that age of logicians and theologians, could lure him from his path. "He lived in an age," says Mr. Macaulay, "in which disputes on the most subtle points of divinity excited an intense interest throughout Europe, and nowhere more than in England. He was placed in the very thick of the conflict. He was in power at the time of the Synod of Dort; and must for months have been daily deafened with talk about election, reprobation, and final perseverance; yet we do not remember a line in his works from which it can be inferred that he was either a Calvinist or an Arminian. While the world

* This is Dr. Shaw's translation. The original is, "*sunt ex analogiâ hominis, non ex analogiâ universi*," which is intelligible and expressive enough, but difficult to render.

was resounding with the noise of a disputatious theology and a disputatious philosophy, the Baconian School, like Allworthy seated between Thwackum and Square, preserved a calm neutrality, half scornful, half benevolent, and, content with adding to the sum of practical good, left the war of words to those who liked it."

It may not at once be apparent how eminently scientific a spirit is shown in Bacon's separation of Science from Theology; but a slight reflection will convince us that, at such an epoch, such a conception was wonderful. The persecution of Galileo by the Church, and his recantation, were fresh in every one's memory; they suffice to show that Religion was still considered the arbiter of Philosophy and Science; nor is this notion yet extinct. The objections raised against the geologists still operate as a powerful obstacle to the universal acceptance of the science; and similar objections constantly obstruct our scientific progress in other departments. This tendency is frequently deplored; perhaps it might be checked in some degree if it were shown to violate a fundamental canon of all sound philosophy, a canon which may be thus expressed: *No speculation should be controlled by an order of conceptions not essentially presupposed by it.* For example, every one feels the absurdity of controlling Poetry by Mathematics; because Poetry in no sense presupposes Mathematics, and derives no assistance from them; but Physics can be controlled by Mathematics, because in Physics there is an essential dependence on Mathematics. We cannot control a chemical speculation by any physiological laws; but conversely we can, and do, control physiological speculations by chemical laws. The canon, thus expounded, is readily applied to the old disputes between Religion and Science. Theology belongs to a totally different order of conceptions from that of Science. Its aims are different, its methods are different, its proofs are different. Only in so far as Theology comes into the circle of other sciences, can it be legitimately controlled by them; for instance, when Theology rests any claims on historical evidence, *then, and*

to that extent, must it be controlled by historical criticism ; when it rests any claim on scientific evidence, then and to that extent, must it submit to scientific control ; just as Poetry, if dealing at all with Mathematical problems, must do so correctly, or submit to the criticism of mathematicians. But when the Church declares against Galileo ; when the perhaps well-meaning but certainly unwise declaimers of the present day oppose Geology on theological grounds, the error is of the same nature as that of a poet who should assail Mathematics on poetical grounds. There can be no fair disputes between Theology and Science. Each pursues its own path ; the one may push aside the other ; they cannot argue, for they have no common ground. In Theology there may be disputes, as between Catholic and Protestant, Lutheran and Zuinglian, Presbyterian and Quaker, because all proceed from the same starting-point, all invoke the same evidence ; and in Science there may be disputes, as between Chemists, Geologists, and Physiologists, because, all employing the same methods, the same kind of evidence, there is common ground for them to fight on. But what a dissonance of words, expressive of no less dissonance in ideas, in the phrases "Lutheran Botany" and "Presbyterian Optics," "Catholic Chemistry" and "Evangelical Anatomy !" Yet it is clear that if Theology is to interfere with and control the speculations of Science, the various theological sects may also control it according to their various views. We therefore see in Bacon's rigorous separation of the two disparate paths of inquiry a profoundly philosophical tendency. He took another and far greater step when he emphatically proclaimed that Physics was "the mother of all the sciences." That this was greatly in advance of his age may be gathered from the fact of its to this day remaining a heresy ; the notion of ethics and politics having the same methods, and being susceptible of the same treatment as physics, is by the majority looked upon as fanciful, if not absurd.

Speaking of the causes of errors in preceding philosophers, Bacon says, "A second cause of very great moment is, that

through all those ages wherein men of genius and learning principally or even moderately flourished, the smallest part of human industry has been spent upon natural philosophy, though this ought to be esteemed as the great mother of the sciences ; for all the rest, if torn from this root, may perhaps be polished and formed for use, but can receive little increase. . . .

“But let none expect any great promotion of the sciences, especially in their effective part, *unless natural philosophy be drawn out to particular sciences ; and again, unless these particular sciences be brought back again to natural philosophy.* From this defect it is that astronomy, optics, music, many mechanical arts, and what seems stranger, *even moral and civil philosophy and logic,* rise but little above their foundations, and only skim over the varieties and surfaces of things, viz. because after these particular sciences are formed and divided off, they are no longer nourished by natural philosophy, which might give them strength and increase ; and therefore no wonder if the sciences thrive not, when separated from their roots.”*

It was in consequence of his having so profoundly penetrated the very nature of science that Bacon was able “to lay down the rules for the conduct of experimental inquiries, before any such inquiries had yet been instituted. The power and compass of a mind which could form such a plan beforehand, and trace not merely the outline, but many of the most minute ramifications or sciences which did not yet exist, must be an object of admiration to all succeeding ages.”†

In his separation of Science from Metaphysics and Theology, and in his conception of Physics as the mother of all the sciences, we see the eminently *positive* spirit of his works ; and this makes him so entirely a modern. He was indeed thoroughly opposed to antiquity, and epigrammatically exposed the fallacy of undue reverence. “The opinion which men entertain of antiquity is a very idle thing,” said he, “and almost incongruous to the word ;

* *Novum Organum*, i. Aph. 79, 80.

† P. Playfair.

for the old-age and length of days of the world should in reality be accounted antiquity, and ought to be attributed to our own times, not to the youth of the world which it enjoyed among the ancients; for that age, though with respect to us it be ancient and greater, yet with regard to the world it was new and less.*

He bore testimony to the genius of several of the ancients, while he declared that their genius availed them nothing, because wrongly employed; adding, in his usual happy style, "a cripple in the right way may beat a racer in the wrong one. Nay, the fleeter the racer is, who has once missed his way, the farther he leaves it behind." "We have an example," he says, "in Aristotle, who corrupted natural philosophy with Logic, . . . being all along more solicitous how men might defend themselves by answers, and advance something that should be *positive in words*, than to *come at the inward truth of nature*. . . . It is true his books of animals, problems, and other pieces, make frequent use of experiments; but then he first pronounced without their assistance, and *did not duly consult experience in forming his degrees and axioms*; but after he had passed judgment according to his own humor, he winds experience round, and leads her captive to his own opinions. . . . Another great reason of the slow progress of the sciences is this: that it is impossible to proceed well in a course where the end is not rightly fixed and defined. Now, the true and genuine end of the sciences is no other than to enrich human life with new inventions and new powers. . . . Fruits and discoveries of works are as the vouchers and securities for the truth of philosophies. But from the philosophies of the Greeks, and their descents through particular sciences, now for the space of so many years scarce a single experiment can be produced tending to accommodate or improve

* It is a point of some interest to ascertain from whom Bacon got the aphorism he frequently quotes: "Antiquity the youth of the world." The *idea* is in Seneca, and is thus expressed by Roger Bacon: "Quanto juniores tanto perspicaciores, quia juniores, posteriores successione temporum, ingrediuntur labores priorum."—*Opus Majus*, pars i. cap. 6, p. 9.

the state of man, that may be justly attributed to the speculations and doctrines of their philosophy. . . . Therefore, since the end of the sciences has not hitherto been well defined by any one, we need not wonder if men have erred and wandered in the things subservient to the proper end. Again, if this end had been rightly proposed, yet men *have chosen a very wrong and impassable way to proceed in.* And it may strike any one with astonishment who duly considers it, that no mortal should hitherto have taken care to open and prepare *a way for the human understanding*, from sense and a well-conducted experience; but that all things should be left either to the darkness of tradition, the giddy agitation and whirlwind of argument, or else to the uncertain waves of accident, or a vague and uninformed experience. Let any one soberly consider what the way is which men have accustomed themselves to, in the inquiry and discovery of any thing, and he will doubtless find that the manner of invention most commonly used is simple and unartful: or on no other than this, viz. when a person goes upon an inquiry, in the first place he searches out and peruses what has been said upon it by others; in the next place adds his own thoughts thereto; and lastly, with great struggle of the mind, solicits and invokes, as it were, his own spirit to deliver him oracles; which is a method entirely destitute of foundation, and rolls wholly upon opinions. Others may call in the assistance of logic; but this is wholly a nominal assistance, for logic does not discover the principles and capital axioms upon which arts are built, but only such as seem agreeable thereto; and when men are curious and earnest with it, to procure proofs, and discover principles or first axioms, it refers them to faith, or puts them off with this trite and common answer—that every artist must believe in his own art.”

Dugald Stewart* well says, “that the idea of the *object* of physical science (which may be justly regarded as the groundwork

* In the excellent Chapter on Induction, *Philos. of Mind*, vol. ii. ch. iv sect. 1.

of Bacon's *Novum Organum*) differs essentially from what was entertained by the ancients, according to whom 'Philosophy is the science of *causes*.' If indeed by *causes* they had meant merely the constant forerunners or antecedents of events, the definition would have coincided nearly with the statement which I have given. But it is evident that by *causes* they meant such antecedents as were *necessarily* connected with the effects, and from the knowledge of which the effects might be foreseen and demonstrated. And it was owing to this confusion of the proper objects of Physics and Metaphysics that, neglecting the observation of facts exposed to the examination of their senses, they vainly attempted, by synthetical reasoning, to deduce, as necessary consequences from their supposed causes, the phenomena and laws of nature."

Dugald Stewart also quotes Aristotle's express declaration, that to know the *physical cause* is also to know the *efficient cause*; and observes, that from this disposition to confound *efficient* with *physical* causes, may be traced the greater part of the theories recorded in the history of philosophy. It is this which has given rise to the attempts, both in ancient and modern times, to account for all the phenomena of moving bodies by *impulse*; and it is this, also, which has suggested the simpler expedient of explaining them by the agency of *minds* united with the particles of matter. To this last class of theories may also be referred the explanations of physical phenomena by such causes as sympathies, antipathies, nature's horror of a vacuum, etc., and other phrases borrowed by analogy from the attributes of animated beings.

It was Bacon's constant endeavor, as it has been the cause of his enduring fame, to teach men the real object of Science, and the scope of their faculties, and to furnish them with a proper Method whereon these faculties might be successfully employed. He thus not only stands clearly out in history as the exponent of the long-agitated antagonism to all the ancient and scholastic thinkers, but also as the exponent of the rapidly increasing ten-

dency towards positive science. He is essentially modern. All his predecessors, even in their boldest attacks upon ancient philosophy, were themselves closely allied to the spirit of that which they opposed. Ramus is the child of Aristotle, though he raised his hand against his father. But Bacon was modern in culture, in object, and in method. He attacked the ancient philosophy without having thoroughly understood it: he attacked it, because he saw that a method which conducted great intelligences to such absurd conclusions as those then in vogue, must necessarily be false.

"Whence can arise," he asks, "such vagueness and sterility in all the physical systems which have hitherto existed in the world? It is not, certainly, from any thing in nature itself; for the *steadiness and regularity of the laws by which it is governed, clearly mark them out as objects of precise and certain knowledge.*

"Neither can it arise from any want of ability in those who have pursued such inquiries, many of whom have been men of the highest talent and genius of the ages in which they lived; and it can therefore arise from nothing else but the perverseness and *insufficiency of the methods which have been pursued.* Men have sought to make a world from their own conceptions, and to draw from their own minds all the materials which they employed; but if, instead of doing so, they had consulted experience and observation, they would have had facts, and not opinions, to reason about, and might have ultimately arrived at the knowledge of the laws which govern the material world.

"As things are at present conducted, a sudden transition is made from sensible objects and particular facts to *general propositions, which are accounted principles*, and round which, as round so many fixed polls, disputation and argument continually revolve. From the propositions thus hastily assumed, all things are derived by a *process compendious and precipitate*, ill suited to discovery, but wonderfully accommodated to debate.

"The way that promises success is the reverse of this. It requires that we should *generalize slowly, going from particular*

things to those that are *but one step more general*; from those to others of still *greater extent*, and so on to such as are *universal*. By such means we may hope to arrive at principles, not vague and obscure, but luminous and well-defined, such as Nature herself will not refuse to acknowledge."

In this pregnant passage he has clearly enough pointed out the position which his philosophy was to occupy. "Many other philosophers," as Professor Macvey Napier remarks, "both ancient and modern, had referred to observation and experiment in a cursory way, as furnishing the materials of physical knowledge; but no one before him had attempted to *systematize the true method of discovery*; or to prove that the inductive is the *only* method by which the genuine office of philosophy can be exercised, and its genuine ends accomplished. It has sometimes been stated that Galileo was, at least, in an equal degree with Bacon, the father of the Inductive Logic; but it would be more correct to say that his discoveries furnished some fortunate illustrations of its principles. To explain these principles was no object of his; nor does he manifest any great anxiety to recommend their adoption with a view to the general improvement of science. The Aristotelian disputant, in his celebrated *Dialogues*, is made frequently to appeal to observation and experiment; but the interlocutor, through whom Galileo himself speaks, nowhere takes occasion to distinguish between the flimsy inductions of the Stagirite, in regard to the objects in dispute, and those which he himself had instituted, or to hint at the very different complexion which philosophy must assume, according as the one kind or the other is resorted to."*

§ IV. WAS THE METHOD NEW AND USEFUL?

Bacon's Method, and the scientific spirit which animates his works, have been indicated in the foregoing pages. His philosophical importance is to be measured by that Method and that

* *On the Scope and Influence of the Philos. Writings of Bacon*: Trans. of the Royal Society of Edinburgh, 1818.

spirit; not by any scientific discoveries. A mind so richly stored could not fail to illustrate his writings with manifold graces of style, and with pregnant aphorisms. Accordingly, his Method having been established, and been superseded, having done its work, nothing remains for our profit but these very graces and aphorisms. The great reformer may excite our admiration, *historically*; his Method excites no admiration for its present intrinsic value. We have a more perfect Method; the processes of scientific investigation are better understood; but we are never in communion with his vast and penetrating intellect without acknowledging his greatness; for his remarks are often as applicable now as they were when first written. Hence the frequency of quotations from Bacon; and these quotations, as Dr. Whewell observes, are more frequently made by metaphysical, ethical, and even theological writers, than they are by the authors of works on Physics. For the present generation, then, whatever the value of Bacon's works, Bacon's Method is useless. Some modern writers have asserted that it was always useless; and this assertion has been supported by arguments so plausible, that they demand attention.

The objections made to Bacon's Method are of three kinds. 1st. It was nothing new; 2d. It was useless as a guide to investigation; 3d. It was already latent in the scientific spirit then abroad, and must have been elicited by some one, sooner or later.

"It was nothing new." This is a very frequent objection, and is urged by the Count Joseph de Maistre and Mr. Macaulay. The former has written a long chapter to prove that Bacon's Induction is nothing more than the Induction of Aristotle; and Mr. Macaulay, who adopts the same opinion, devotes several vivacious pages to show that everybody unconsciously practices this inductive Method. M. de Maistre's *Examen de la Philosophie de Bacon* is a vehement attack, written with the celebrated author's usual vivacity, but with more than his usual arrogance and vehemence. As there are many things in Bacon hasty, inexact, or

partaking of the prejudices and errors of his age, his antagonist is at no loss to find matter for ridicule; but when he treats of Bacon's Method and Spirit as contemptible puerilities, he only excites a smile in the dispassionate reader. His arguments against Bacon's Method are, first, that Aristotle had analyzed it before him; secondly, that Induction is only one form of the Syllogism.

It is true that Aristotle told us what Induction was; but it is not true that he analyzed it, as Bacon has done; nor did he ever pronounce it to be *the* Method of inquiry: on the contrary, it only served him as *one* of the means of ascertaining truth, and was not so important in his eyes as the Syllogism. Bacon asserts Induction to be the only Method; and has no words too strong to express his scorn of the Syllogism, "which may catch the assent, but lets the things slip through." Dugald Stewart observes that we might as well declare that the ancients had anticipated Newton because they too used the word "attraction," as that Aristotle anticipated Bacon because he too speaks of "Induction."* This is, however, going too far the other way. In our Chapter on the Stagirite we have indicated the relation in which the two conceptions stand to each other.

M. de Maistre says that Induction and Syllogism are the same. "At bottom, what is Induction? Aristotle clearly saw it: *It is a syllogism without the middle term*—ἐστὶ δὲ ὁ τοιοῦτος συλλογισμὸς τῆς πρώτης καὶ ἀμέσου προτάσεως. (*Anal. Prior.* ii. 12.) What does it signify whether I say, *Every simple being is indestructible by nature; now my soul is a simple being, therefore, etc.*; or whether I say directly, *My soul is simple, it is therefore indestructible*. In either case it is the syllogism which is virtually in the induction, as it is in the enthymeme."

Now it is quite true that every induction may be thrown into the form of a syllogism by supplying the major premise; and it is this which led Archbishop Whately to conclude that Induction itself is but a peculiar case of ratiocination, and that the universal type of all reasoning is the syllogism. We cannot but

* *Philos. of Mind*, vol. ii. ch. iv. sect. 2.

agree with John Mill in holding precisely the reverse opinion, and believing that ratiocination itself is resolvable into Induction.* Be this as it may, M. de Maistre has afforded us an illustration of the difference between Aristotle and Bacon in the very passage quoted.

If every induction can be thrown into the form of a syllogism, by supplying the major premise, it is in the way this major premise is established that we must seek the real difference between the Syllogistic and Inductive Methods: and that difference is the difference between *à priori* and *à posteriori*. Every one who has read Bacon, knows that his scorn for the Syllogism is not scorn for it as a *form of ratiocination*, but as a *means of investigation*. He objects to our proceeding to deduce from an axiom not accurately and inductively obtained, consequences which may very well be contained in the axiom, although having no relation to the truth of things. "The axioms in use, being derived from slender experience and a few obvious particulars, are generally applied in a corresponding manner; no wonder they lead not to new particulars."† Again: "Syllogism consists of propositions, propositions of words, and words are the signs of notions; therefore, if our *notions, the basis of all*, are confused, and *over-hastily taken from things*, nothing that is built upon them can be firm; whence our only hope rests upon *genuine Induction*."‡

Nothing can be more explicit. Bacon very well knew the difference between his Method and that of the Aristotelians; and he very well expressed this difference. To turn round upon him and say all Induction is itself but Syllogism, is mere evasion. He was not giving a logical analysis of the mind: he was warning men against long-standing errors, and pointing out to them the path of truth.

Mr. Macaulay's arguments are of a different stamp. To us they are only ingenious and plausible; yet so ingenious and so

* See *System of Logic*, vol. i. pp. 372-3.

† *Novum Organum*, Aph. 25.

‡ *Ibid.*, Aph. 14.

plausible as to gain many followers. They are mostly true as far as they go, but do not appear to us to go to the real point. We shall select the main parts of his opposition :

“The inductive method has been practised ever since the beginning of the world, by every human being. It is constantly practised by the most ignorant clown, who by this method is led to the conclusion, that if he sows barley he shall not reap wheat. A plain man finds his stomach out of order. He never heard of Lord Bacon's name ; but he proceeds in the strictest conformity with the rules laid down in the second book of the *Novum Organum*, and satisfies himself that mince-pies have done the mischief. ‘I ate mince-pies on Monday and Wednesday, and was kept awake by indigestion all night.’ This is the *comparentia ad intellectum instantiarum convenientium*. ‘I did not eat any on Tuesday and Friday, and I was quite well.’ This is the *comparentia instantiarum in proximo quæ natura data privantur*. ‘I ate very sparingly of them on Sunday, and was very slightly indisposed in the evening. But on Christmas-day I almost dined on them, and was so ill that I was in some danger.’ This is the *comparentia instantiarum secundum magis et minus*. ‘It cannot be the brandy which I took with them ; for I have drunk brandy for years, without being the worse for it.’ This is the *rejectio naturarum*. We might easily proceed, but we have already sufficiently explained our meaning.”

The answer to this is, that Induction being the process of all reasoning, of course so long as men have reasoned they have reasoned inductively. But there is simple and incautious Induction, and there is cautious methodical Induction,—instinct and science ; in ordinary cases, men pursue the induction *per enumerationem simplicem* ; in scientific investigations they must pursue a very different method ; and at the time Bacon wrote, almost all philosophical and scientific speculations were vitiated by the incorrect method.

“Those who object to the importance of Bacon's precepts in philosophy,” says Mr. Hallam, “that mankind have practised

many of them immemorially, are rather confirming their utility than taking off much from their originality, in any fair sense of the term. Every logical method is built on the common faculties of human nature, which have been exercised since the creation, in discerning—better or worse—truth from falsehood, and inferring the unknown from the known. That men might have done this more correctly, is manifest from the quantity of error into which, from want of reasoning well on what came before them, they have habitually fallen. In experimental philosophy, to which the more special rules of Lord Bacon are generally referred, there was a notorious want of that very process of reasoning which he supplied.* “Nothing can be more certain,” as Professor Napier observes, “than that Bacon rests the whole hopes of his philosophy on the *novelty* of his logical precepts; and that he uniformly represents the ancient philosophers, particularly Aristotle, as having been wholly regardless of the inductive method in their physical inquiries. Bacon does not indeed say that the ancient philosophers never employed themselves in observing Nature; but he maintains that there is a wide difference between observation, as it was employed by them, and the art of observing for the purposes of philosophical discovery.”†

Men in Bacon's time reasoned like the facetious judge in Mr. Macaulay's anecdote, “who was in the habit of jocosely propounding, after dinner, a theory, that the cause of the prevalence of Jacobinism was the practice of bearing three names. He quoted, on the one side, Charles James Fox, Richard Brinsley Sheridan, John Horne Tooke, John Philpot Curran, Samuel Taylor Coleridge, Theobald Wolfe Tone. These were *instantiæ convenientes*. He then proceeded to cite instances *absentiæ in proximo*—William Pitt, John Scott, William Wyndham, Samuel Horsley, Henry Dundas, Edmund Burke. He might have gone

* *Hist. of Lit. of Europe*, iii. 182.

† *Dissertation on the Scope and Influence of Bacon's Writings*, p. 13. See, also, a passage to the same effect in Herschel's *Discourse*, pp. 113, 114, which we do not quote, because the work is in everybody's hands.

on to instances *secundum magis et minus*. The practice of giving children three names has been for some time a growing practice, and Jacobinism has also been growing. The practice of giving children three names is more common in America than in England. In England we have still a King and a House of Lords; but the Americans are Republicans. The *rejectiones* are obvious. Burke and Wolfe Tone were both Irishmen; therefore the being an Irishman is not the cause. In this way our inductive philosopher arrives at what Bacon calls the *vintage*, and pronounces that having three names is the cause of Jacobinism."

This is a very good theory for a jocular one; but we are surprised to find so acute a writer as Mr. Macaulay speaking of it in the terms he does: "Here is an induction corresponding with Bacon's analysis, and ending in a monstrous absurdity. In what then does this induction differ from the induction which leads us to the conclusion that the presence of the sun is the cause of our having more light by day than by night? The difference evidently is, *not in the kind of instances, but in the number of instances*; that is to say, the difference is not in that part of the process for which Bacon has given precise rules, but in a circumstance for which no precise rule can possibly be given. If the learned author of the theory about Jacobinism had enlarged either of the tables a little, his system would have been destroyed. The names of Tom Paine and William Windham Grenville would have been sufficient to do the work."

We especially dissent from the clause printed in italics, which seems to us at variance with all sound Induction. It is precisely the *kind* of instances adduced in the theory, which makes the theory absurd. The whole theory is a gross example of "causation inferred from casual conjunction, without any presumption arising from known properties of the supposed agent: which is the characteristic of empiricism." Although in this theory there has been a certain superficial elimination employed, yet that elimination is obviously too incomplete for any satisfactory result. Mr. Macaulay subsequently asks, What number of instances is

sufficient to justify belief? After how many experiments would Jenner have been justified in believing vaccination to be a safeguard against the smallpox? We answer that the *number* of instances depends on the *kind* of instances, and on the *theory* which presides over their collection. In proportion as the facts adduced are complex, must the theory which would explain them be consistent with all other known truths, before the facts themselves can have any significance.

Bacon's originality is in no way affected by proving that all men at all times, when they reasoned correctly, reasoned inductively. Moreover, in Bacon's particular department, men had notoriously pursued a wrong Method.* They were not *aware* of the necessity, which he declared there was in all investigations, to proceed upon a *graduated and successive Induction*. Bacon first made them aware of this; and, as Dr. Whewell says, "the truly remarkable circumstance is to find this recommendation of a continuous advance from observation, by limited steps, through successive gradations of generality, given at a time when speculative men in general had only just begun to perceive that they must begin their course from experience in some way or other. . . . In catching sight of this principle, and in ascribing to it its due importance, Bacon's sagacity, so far as I am aware, wrought unassisted and unrivalled."†

The second question now presents itself. Was the method useful as a guide in investigation? Many persons have declared it to be useless. Mr. Macaulay is of the same opinion. He says, with great truth, "By stimulating men to the discovery of *new* truth, Bacon stimulated them to employ the inductive method—

* And this in spite of the warning so emphatically given three centuries before Francis Bacon, by his great namesake Roger Bacon: "Sine experientia nihil sufficienter sciri potest. Duo enim sunt modi cognoscendi, scilicet per argumentum et experimentum. Argumentum concludit et facit nos concludere questionem, sed non certificat neque removet dubitationem, ut quiescat animus in intuitu veritatis, nisi eam inveniatur viâ experientiæ."—*Opus Majus*, pars vi. cap. i.

† *Philos. of Inductive Sciences*, ii. 395, 396.

the only method by which truth can be discovered. By stimulating men to the discovery of *useful* truth, he furnished them with a motive to perform the inductive process well and carefully. His predecessors had been anticipators of Nature. They had been content with first principles, at which they had arrived by the most scanty and slovenly induction. And why was this? It was, we conceive, because their philosophy proposed to itself no practical end, because it was merely an exercise of the mind. A man who wants to contrive a new machine, or a new medicine, has a strong motive to observe patiently and accurately, and to try experiment after experiment; but a man who merely wants a theme for disputation, or declamation, has no such motive."

Now in this passage, as it seems to us, the very merit we are claiming for Bacon is conceded. We are told that Bacon stimulated men to employ the Inductive Method—the only method by which new truth could be discovered. Who pointed out the futility of anticipating Nature?—Bacon. Who exposed the "scanty and slovenly induction" of the Schoolmen?—Bacon. His merit is not simply that of stimulating men to the discovery of new lands, but of also affording them chart and compass wherewith to discover the new lands. There were several eminent men, his predecessors and contemporaries, who all rose up against the ancient systems, and stimulated men to the discovery of useful truth; but these men, although all of them constantly insisted upon observation and experiment, had no glimpse, or only a very partial and confused glimpse, of the Inductive Method. So that when Mr. Macaulay says, "It was not by furnishing philosophers with rules for performing the inductive process well, but by furnishing them with a motive for performing it well, that he conferred so vast a benefit on society," we believe he is contradicted, on all sides, by history. The *motive* had been given by many—indeed, one may say that it was a tendency of the age; the *rules* had been devised by no one but himself. These rules, it is true, were far from perfect; but they constitute the beginning, and form the

basis of the more perfect structure which successors have erected. Mr. Macaulay's argument receives its force solely from what we cannot but regard as his misconception of the Baconian Induction. That Induction he declares to be daily performed by every man; but this is confounding ordinary Induction with scientific Induction. It is confounding a simple inference, with a long and complicated process of inference. It is confounding what Bacon incessantly and emphatically distinguishes, viz. *Induction* with the *Inductive Method*; and this confusion has probably influenced him in the selection of his illustrations. None of the things he has named require a complicated process of reasoning for their discovery. If a man wants to make a shoe, he needs inductions, but is certainly in no need of the Inductive Method; if he wants to discover a law of Nature, the Inductive Method is indispensable. Mr. Macaulay will not maintain that the ordinary man, who wishes to find out a law of Nature, proceeds in his inquiry by a graduated and successive Induction from particulars to generals, and from generals to those which are still more general; and this without "anticipation" of Nature—without rash and hasty leaping from one particular to some extreme generality. In fact, although *Induction*, as the type of reasoning, must be carried on by every reasoning animal, yet so far is the *Inductive Method* from being the ordinary process of ordinary men, that we know of scarcely any process *so contrary* to the natural bias of the mind. Bacon has more than once alluded to this bias, which makes us judge hastily, and on the slenderest evidence. Indeed, the Inductive Method requires a constant and watchful repression of our natural tendency to "anticipate," and endeavor, by a short cut, to abridge the long journey which conducts us to the Truth.

But while we think Mr. Macaulay underrates the importance of the inductive rules, we quite agree with him that Bacon overrated their importance. "Our method of discovery in science," so runs one of his aphorisms, "is of such a nature that there is not much left to acuteness and strength of genius, but all degrees of genius

and intellect are brought nearly to the same level."* This is contradicted by every two men engaging in scientific pursuits. In proportion to the effectiveness of the instrument, will the original superiority make itself more manifest. Place axes in the hands of two men commissioned to make a clearing in the forest, and the stronger man will be at a greater advantage than he was before. Moreover the Method, however excellent when followed, cannot force men to follow it: the natural bias of the mind is against it. Mr. Macaulay therefore is perfectly right in preferring the spirit of Bacon's Method to the rules given in the second book of the *Organum*.

There is however another reason why the spirit is preferable to the rules; and that reason is the incompleteness of those rules. The radical defect of Bacon's method lies in its being *inductive*, and not also *deductive*. He was so deeply impressed with a sense of the insufficiency of the Deductive Method alone, which he saw his contemporaries pursuing, and which he knew to be the cause of the failure of his predecessors, that he bestowed all his attention on the Inductive Method. His want of mathematical knowledge had also no small share in this error. Although however it may be justly said that he did not sufficiently exemplify the Deductive Method, it is not correct to say that he entirely neglected it. Those who assert this, forget that the second part of the *Novum Organum* was never completed. In the second part it was his intention to treat of Deduction, as is plain from the following passage: "The indications for the interpretation of Nature include two general parts. The first relates to the raising of Axioms from experience; and the second, to the *deducing or deriving of new experiments from Axioms* (de ducendis aut derivandis experimentis novis ab axiomatibus)."† We here see that he comprehended the two-fold nature of the method; but inasmuch as he did not publish the second part of his *Organum*, we may admit the remark of Professor Playfair, that "in a very extensive depart-

* *Novum Organum*, i. Aph. 61.

† *Ibid.*, ii. Aph. 10.

ment of physical science, it cannot be doubted that investigation has been carried on, not perhaps more easily, but with a less frequent appeal to experience, than the rules of the *Novum Organum* would seem to require. In all physical inquiries where mathematical reasoning has been employed, after a few principles have been established by experience, a vast multitude of truths, equally certain with the principles themselves, have been deduced from them by the mere application of geometry and algebra. . . . The strict method of Bacon is therefore only necessary where the thing to be explained is new, and where we have no knowledge, or next to none, of the powers employed.”*

His deficiency in mathematical knowledge caused him to overlook the equal importance of Deduction and Induction :—“Bacon has judiciously remarked, that the *axiomata media* of every science principally constitute its value. The lowest generalizations, until explained by and resolved into the middle principles, of which they are the consequences, have only the imperfect accuracy of empirical laws ; while the most general laws are *too* general, and include too few circumstances to give sufficient indication of what happens in individual cases, where the circumstances are almost always immensely numerous. In the importance therefore which Bacon assigns, in every science, to the middle principles, it is impossible not to agree with him. But I conceive him to have been radically wrong in his doctrine respecting the mode in which these *axiomata media* should be arrived at ; although there is no one proposition in his works for which he has been so extravagantly eulogized. He enunciates, as a universal rule, that induction should proceed from the lowest to the middle principles, and from those to the highest, never reversing that order, and consequently leaving no room for the discovery of new principles by way of deduction at all. It is not to be conceived that a man of Bacon’s sagacity could have fallen into this mistake, if there had existed in his time, among the sciences

* *Dissertation*, pp. 58, 61.

which treat of successive phenomena, one single deductive science, such as mechanics, astronomy, optics, acoustics, etc., now are. In those sciences, it is evident that the higher and middle principles are by no means derived from the lowest, but the reverse. In some of them, the very highest generalizations were those earliest ascertained with any scientific exactness; as, for example (in mechanics), the laws of motion. Those general laws had not indeed at first the acknowledged universality which they acquired after having been successfully employed to explain many classes of phenomena to which they were not originally seen to be applicable; as when the laws of motion were employed in conjunction with other laws to explain deductively the celestial phenomena. Still the fact remains, that the propositions which were afterwards recognized as the most general truths of the science, were, of all its accurate generalizations, those earliest arrived at.

"Bacon's greatest merit therefore cannot consist, as we are so often told that it did, in exploding the vicious method pursued by the ancients, of flying to the highest generalizations for it, and deducing the middle principles from them, since this is neither a vicious nor an exploded method, but the universally accredited method of modern science, and that to which it owes its greatest triumphs. The error of ancient speculation did not consist in making the largest generalizations first, but in making them without the aid or warrant of rigorous inductive methods, and applying them deductively without the needful use of that important part of the deductive method termed verification."*

This passage certainly lays bare the weakness of Bacon's Method; and does so, we believe, for the first time. But we cannot entirely concur in the concluding paragraph. Although Bacon did not perhaps see the real importance of the Deductive Method, he did see the futility of the Deductive Method employed before his time; and he saw moreover that the cause lay

* Mill's *System of Logic*, ii. 524-6.

in the want of "verification"—in the want of "the aid or warrant of rigorous inductive methods:" this we must think his greatest merit, as we think his imperfect conception of the Deductive Method his greatest imperfection.

There is also another potent reason why the merely Inductive Method should not have contributed to any great discoveries; and we must again borrow from the *System of Logic* the passage wherein this is exhibited:

"It has excited the surprise of philosophers that the detailed system of inductive logic has been turned to so little direct use by subsequent inquirers,—having neither continued, except in a few of its generalities, to be recognized as a theory, nor having conducted, in practice, to any great scientific results. But this, though not unfrequently remarked, has scarcely received any plausible explanation; and some indeed have preferred to assert that all rules of induction are useless, rather than suppose that Bacon's rules are grounded upon an insufficient analysis of the inductive process. Such however will be seen to be the fact, as soon as it is considered that Bacon entirely overlooked plurality of causes. All his rules tacitly imply the assumption, so contrary to all we know of Nature, that a phenomenon cannot have more than one cause."*

In another passage, too long for extract, the same author points out a capital error in Bacon's view of the inductive philosophy, viz. his supposition that the principle of elimination—that great logical instrument which he had the immense merit of first bringing into use—was applicable in the same sense, and in the same unqualified manner, to the investigation of *co-existences*, as to that of the *successions of phenomena*.†

In conclusion, it may be said that Bacon's conception of a scientific Method was magnificent, as far as it went; but in consequence of certain deficiencies, owing principally to the want of any established science as a model, the Method he laid down was

* *System of Logic*, ii. 373.

† *Ibid.*, ii. 127 *et seq.*

only *indirectly* useful. If it did not produce great discoveries, it certainly did exercise an important influence on the minds of those who were afterwards to make great discoveries. "The way to prove that Bacon's writings were powerful agents in the advancement of physical knowledge," says Professor Napier, "is to prove that they produced these effects (*viz.* the overthrow of existing methods—stimulus given to experimental inquiry—and ingenious views and principles requisite for such inquiry); and the proof that such effects were actually produced by them, must necessarily be derived from the testimony of those who early experienced, or became otherwise acquainted with, their operation." And the greater part of his instructive Essay is devoted to this proof. The proofs are numerous and decisive, gathered not only from the English and French writers, but also from Italian and German.

And now the last question presents itself, Was not Bacon's Method latent in the scientific spirit of the age? Yes; just as much as the invention of the steam-engine was latent in the knowledge and tendencies of the age of Watt. What does invention mean more than the finding what others are still seeking? were it not hidden somewhere, no one could find it. Let no one therefore endeavor to rob a great man of his fame by declaring that the thing found was lying ready to be found, and would have sooner or later been found by some one. Yes, by some one who had eyes to see what his fellow-men could not see: by some other *great* man. How was it that Bacon's immediate predecessors and contemporaries did not detect this latent method? It was lying there as open for inspection to them as to him. Why did he alone find it? Because he alone was competent to find it.

It is very true that in his day, and previously, great discoveries had been made; and as they only could be made upon a true Method, the Method was implied in them. But this is no argument against Bacon's originality. "Principles of evidence," says Mr. Mill, "and theories of method, are not to be constructed à

priori. The laws of our rational faculty, like those of every other natural agency, are only learnt by seeing the agent at work. The earlier achievements of science were made without the conscious observance of any scientific method; and we should never have known by what process truth is to be ascertained if we had not previously ascertained truths." And if we consider for a moment the extreme paucity of ascertained truths in science at the time Bacon wrote, it will enhance our admiration of his marvellous sagacity, to see him do so much with such poor materials; as Playfair says, "the history of human knowledge points out nobody of whom it can be said that, placed in the situation of Bacon, he would have done what Bacon did,—no man whose prophetic genius would enable him to delineate a system of science which had not yet begun to exist."

Bacon is a great subject, and one as attractive as great; but our object here has been solely to exhibit his Method, and to indicate its historical position. We have done nothing but point out the grounds upon which his fame, as the father of Experimental Philosophy, is built. His Method alone engaged us, because by it alone he claims a place in this history. We have not dwelt upon his errors; neither have we dwelt upon the wondrous and manifold excellences of that mind which Mr. Macaulay has so felicitously compared to the tent the fairy Peribanou gave to Prince Ahmed:—"Fold it, and it seemed the toy for the hand of lady: spread it, and the armies of powerful Sultans might repose beneath its shade."

SECOND EPOCH.

FOUNDATION OF THE DEDUCTIVE METHOD

CHAPTER I.

DESCARTES.

§ I. LIFE OF DESCARTES.

JUST at the close of the sixteenth century, 1596, there was born in Touraine, of Breton parents, a feeble sickly child, named René Descartes Duperron. A few days after his birth, a disease of the lungs carried off his mother. The sickly child grew to be a sickly boy ; and, till the age of twenty, his life was always despaired of.

That boy was one the world could ill afford to lose. Few who saw him creeping on the path, which his companions galloped along like young colts, would have supposed that the boy, whose short dry cough and paleness seemed to announce an early grave, was shortly to become one of the world's illustrious leaders, whose works would continue, centuries after their appearance, to be studied, quoted, and criticised. His masters loved him. He was a pupil of promise ; and in his eighth year had gained the title of the Young Philosopher, from his avidity to learn, and his constant questioning.

His education was confided to the Jesuits. This astonishing body has many evils laid to its door, but no one can refuse to it the praise of having been ever ready to see and apply the value

of education. In the college of La Flèche the young Descartes was instructed in mathematics, physics, logic, rhetoric, and the ancient languages. He was an apt pupil; learned quickly, and was never tired of learning.

Was the food supplied by the Jesuits nutritious? M. Thomas remarks, "There is an education for the ordinary man; for the man of genius there is no education but what he gives himself; the second generally consists in destroying the first." And so it was with Descartes, who, on leaving La Flèche, declared that he had derived no other benefit from his studies than that of a conviction of his utter ignorance, and a profound contempt for the systems of philosophy in vogue. The incompetence of philosophers to solve the problems they occupied themselves with,—the anarchy which reigned in the scientific world, where no two thinkers could agree upon fundamental points,—the extravagance of the conclusions to which some accepted premises led, determined him to seek no more to slake his thirst at their fountains.

"And that is why, as soon as my age permitted me to quit my preceptors," he says, "I entirely gave up the study of letters; and resolving to seek no other science than that which I could find in myself, or else in the great book of the world, I employed the remainder of my youth in travel, in seeing courts and camps, in frequenting people of diverse humors and conditions, in collecting various experiences, and above all in endeavoring to draw some profitable reflection from what I saw. For it seemed to me that I should meet with more truth in the reasonings which each man makes in his own affairs, and which if wrong would be speedily punished by failure, than in those reasonings which the philosopher makes in his study, upon speculations which produce no effect, and which are of no consequence to him, except perhaps that he will be more vain of them the more remote they are from common sense, because he would then have been forced to employ more ingenuity and subtlety to render them plausible."*

* *Discours de la Méthode*, p. 6 of the convenient edition of M. Jules Simon. Paris, 1844.

For many years he led a roving, unsettled life; now serving in the army, now making a tour; now studying mathematics in solitude, now conversing with scientific men. One constant purpose gave unity to those various pursuits. He was elaborating his answers to the questions which perplexed him; he was preparing his Method.

When only three-and-twenty he conceived the design of a reformation in philosophy. He was at that time residing in his winter-quarters at Neuburg, on the Danube. His travels soon afterwards commenced, and at the age of thirty-three he retired into Holland, there in silence and solitude to arrange his thoughts into a consistent whole. He remained there eight years; and so completely did he shut himself from the world, that he concealed from his friends the very place of his residence.

When the results of his meditative solitude were given to the world, in the shape of his celebrated *Discourse on Method*, and his *Meditations* (to which he invented replies), the sensation produced was immense. It was evident to all men that an original and powerful thinker had arisen; and although of course this originality could not but rouse much opposition, from the very fact of being original, yet Descartes gained the day. His name became European. His controversies were European quarrels. Charles I., of England, invited him over, with the promise of a liberal appointment; and the invitation would probably have been accepted, had not the civil war broken out. He afterwards received a flattering invitation from Christina of Sweden, who had read some of his works with great satisfaction, and wished to learn from himself the principles of his philosophy. He accepted it, and arrived in Stockholm in 1649. His reception was most gratifying; and the Queen was so pleased with him as earnestly to beg him to remain with her, and give his assistance towards the establishment of an academy of sciences. But the delicate frame of Descartes was ill fitted for the severity of the climate, and a cold, caught in one of his morning visits to Christina, produced inflammation of the lungs, which put an end to

his existence. Christina wept for him, had him interred in the cemetery for foreigners, and placed a long eulogium upon his tomb. His remains were subsequently (1666) carried from Sweden into France, and buried with great ceremony in St. Geneviève du Mont.

Descartes was a great thinker; but having said this, we have almost exhausted the praise we can bestow upon him as a man. In disposition he was timid to servility. When promulgating his proofs of the existence of the Deity, he was in evident alarm lest the Church should see something objectionable in them. He had also written an astronomical treatise; but hearing of the fate of Galileo, he refrained from publishing, and always used some chicane in speaking of the world's movement. He was not a brave man; nor was he an affectionate man. But he was even-tempered, placid, and studious not to give offence. In these, as in so many other points, he resembles his illustrious rival, Francis Bacon; but his name has descended spotless to posterity, while Bacon's has descended darkened with more spots than time can efface. It would be hard to say how much difference of *position* had to do with this difference of moral purity. Had Bacon lived in his study, we should have only praises for his name.

§ II. THE METHOD OF DESCARTES.

There have been disputes as to Bacon's claim to the title of Father of Experimental Science; but no one disputes the claim of Descartes to the title of Father of Modern Philosophy. Ontology and Psychology are still pursued upon his Method; and his speculations are still proudly referred to, by most Continental thinkers, as perfect, or almost perfect, examples of that Method.

In his Dedication of the *Meditations* to the Sorbonne, he says: "I have always thought that the two questions, of the existence of God, and the nature of the soul, were the chief of those which ought to be demonstrated rather by philosophy than by theology; for although it is sufficient for us, the faithful, to be-

lieve in God, and that the soul does not perish with the body, it certainly does not seem possible ever to persuade the infidels to any religion, nor hardly to any moral virtue, unless we first prove to them these two things by natural reason." Extraordinary language, which shows how completely Philosophy had gained complete independence.

But if Philosophy is to be independent,—if reason is to walk alone, in what direction must she walk? Having relinquished the aid of the Church, there were but two courses open: the one, to tread once more in the path of the ancients, and to endeavor by the ancient Methods to attain the truth; or else to open a new path, to invent a new Method. The former was barely possible. The spirit of the age was deeply imbued with a feeling of opposition against the ancient Methods; and Descartes himself had been painfully perplexed by the universal anarchy and uncertainty which prevailed. The second course was therefore chosen.

Uncertainty was the disease of the epoch. Skepticism was wide-spread, and even the most confident dogmatism could offer no criterium of certitude. This want of a criterium we saw leading, in Greece, to Skepticism, Epicureanism, Stoicism, the New Academy, and finally leading the Alexandrians into the province of faith, to escape from the dilemma. The question of a criterium had long been the vital question of philosophy. Descartes could get no answer to it from the Doctors of his day. Unable to find firm ground in any of the prevalent systems; distracted by doubts; mistrusting the conclusions of his own understanding; mistrusting the evidences of his senses, he determined to make a *tabula rasa*, and reconstruct his knowledge. He resolved to examine the premises of every conclusion, and to believe nothing but upon the clearest evidence of reason; evidence so convincing that he could not by any effort refuse to assent to it.

He has given us the detailed history of his doubts. He has told us how he found that he could plausibly enough doubt of

every thing, except of his own existence. He pushed his skepticism to the verge of self-annihilation. There he stopped: there, in Self, in his Consciousness, he found at last an irresistible Fact, an irreversible Certainty.

Firm ground was discovered. He could doubt the existence of the external world, and treat it as a phantasm; he could doubt the existence of God, and treat the belief as a superstition; but of the existence of his thinking, doubting mind, no sort of doubt was possible. He, the doubter, existed, if nothing else existed. The existence that was revealed in his own Consciousness was the primary fact, the first indubitable certainty. Hence his famous *Cogito, ergo Sum*: I think, therefore I am.

It is somewhat curious, and, as an illustration of the frivolous verbal disputes of philosophers, not a little instructive, that this celebrated *Cogito, ergo Sum* should have been frequently attacked for its logical imperfection. It has been objected, from Gassendi downwards, that to say, "I think, *therefore* I am," is a begging of the question, since existence has to be *proved* identical with thought. Certainly, if Descartes had intended to prove his own existence by reasoning, he would have been guilty of the *petitio principii* Gassendi attributes to him; viz. that the major premise, "that which thinks exists," is assumed, not proved. But he did not intend this. What was his object? He has told us that it was to find a starting-point from which to reason,—to find an irreversible certainty. And where did he find this? In his own Consciousness. Doubt as I may, I cannot doubt of my own existence, because my very doubt reveals to me a something which doubts. You may call this an assumption, if you will: I point out the fact as one above and beyond all logic; which logic can neither prove nor disprove; but which must always remain an irreversible certainty, and as such a fitting basis of philosophy.*

I exist. No doubt can darken such a truth; no sophism can confute this clear principle. This is a certainty, if there be none

* See his replies to the third and fifth series of Objections, affixed to his *Meditations*.

other. This is the basis of all science. It is in vain to ask for a proof of that which is self-evident and irresistible. I exist. The *consciousness* of my existence is to me the assurance of my existence.

Had Descartes done no more than point out this fact, he would have no claim to notice here; and we are surprised to find many writers looking upon this *Cogito, ergo Sum*, as constituting the great idea in his system. Surely it is only a statement of universal experience—an epigrammatic form given to the common-sense view of the matter. Any clown would have told him that the assurance of his existence was his consciousness of it; but the clown would not have stated it so well. He would have said: I know I exist, because I *feel* that I exist.

Descartes therefore made no discovery in pointing out this fact as an irresistible certainty. The part it plays in his system is only that of a starting-point. It makes *Consciousness* the basis of all truth; there is none other possible. Interrogate *Consciousness*, and its clear replies will be Science. Here we have a new basis and a new philosophy introduced. It was indeed but another shape of the old formula, "Know thyself," so differently interpreted by Thales, Socrates, and the Alexandrians: but it gave that formula a precise signification, a thing it had before always wanted. Of little use could it be to tell man to know himself. How is he to know himself? By looking inwards? We all do that. By examining the nature of his thoughts? That had been done without success. By examining the *process* of his thoughts? That too had been accomplished, and the logic of Aristotle was the result.

The formula needed a precise interpretation; and that interpretation Descartes gave. *Consciousness*, said he, is the basis of all knowledge; it is the only ground of absolute certainty. Whatever it distinctly proclaims must be true. The process, then, is simple: examine your *Consciousness*, and its clear replies. Hence the vital portion of his system lies in this axiom, *all clear ideas are true*: whatever is clearly and distinctly con

ceived is true. This axiom he calls the foundation of all science, the rule and measure of truth.*

The next step to be taken was to determine the rules for the proper detection of these ideas; and these rules he has laid down as follows :

I. Never to accept any thing as true, but what is *evidently* so ; to admit nothing but what so clearly and distinctly presents itself as true that there can be no reason to doubt it.

II. To divide every question into as many separate questions as possible ; that each part being more easily conceived, the whole may be more intelligible.—(Analysis.)

III. To conduct the examination with order, beginning by that of objects the most simple, and therefore the easiest to be known, and ascending little by little up to knowledge of the most complex.—(Synthesis.)

IV. To make such exact calculations, and such circumspections, as to be confident that nothing essential has been omitted.

Consciousness being the ground of all certainty, every thing of which you are clearly and distinctly conscious must be true ; every thing which you clearly and distinctly conceive exists, if the idea of it involves existence.

In the four rules, and in this view of Consciousness, we have only half of Descartes' system : the psychological half. It was owing, we believe, to the exclusive consideration of this half that Dugald Stewart was led (in controverting Condorcet's assertion that Descartes had done more than either Galileo or Bacon towards experimental philosophy) to say that Condorcet would have been nearer the truth if he had pointed him out as the Father of the Experimental Philosophy of the Mind. Perhaps the title is just ; but Condorcet's praise, though exaggerated, was not without good foundation.

* "Hæc igitur detectâ veritate simul etiam invenit omnium scientiarum fundamentum : ac etiam omnium aliarum veritatum mensuram ac regulam ; scilicet, quicquid tam clarè ac distinctè percipitur quàm istud verum est."—*Princip. Phil.* p. 4.

There is, in truth, another half of Descartes' system; equally important, or nearly so: we mean the Mathematical or Deductive Method. His eminence as a mathematician is universally recognized. He was the first to make the grand discovery of the application of Algebra to Geometry; and he made this at the age of twenty-three. The discovery that geometrical curves might be expressed by algebraical numbers, though highly important in the history of mathematics, only interests us here by leading us to trace his philosophical development. We see him deeply engrossed in mathematics; we see him awakening to the conviction that mathematics were capable of a still further simplification, and of a far more extended application. Struck as he was with a certitude of mathematical reasoning, he began applying the principles of mathematical reasoning to the subject of metaphysics. His great object was, amidst the skepticism and anarchy of his contemporaries, to found a system which should be solid and convincing. He first wished to find a basis of certitude—a starting-point: this he found in Consciousness. He next wished to find a method of certitude: this he found in mathematics.

“Those long chains of reasoning,” he tells us, “all simple and easy, which geometers use to arrive at their most difficult demonstrations, suggested to me that all things which came within human knowledge must follow each other in a similar chain; and that provided we abstain from admitting any thing as true which is not so, and that we always preserve in them the order necessary to deduce one from the other, there can be none so remote to which we cannot finally attain, nor so obscure but that we may discover them.”* From these glimpses of the twofold nature of Descartes' Method, it will be easy to see into his whole system. The psychological and mathematical Methods are inseparable, Consciousness being the only ground of certitude, mathematics the only method of certitude.

* *Discours de la Méthode*, p. 12.

We may say therefore that the Deductive Method was now completely constituted. The whole operation of philosophy henceforth consisted in deducing consequences. The premises had been found; the conclusions alone were wanting. This was held to be true of physics no less than of psychology. Thus, in his *Principia*, he announces his intention of giving a short account of the principal phenomena of the world, not that he may use them as reasons to prove any thing; for he adds, "we desire to deduce effects from causes, not causes from effects, but only in order that out of the innumerable effects which we learn to be capable of resulting from the same causes, we may determine our minds to consider some rather than others."*

Such being the Method of Descartes, our readers will hear with surprise that some French writers have declared it to be the same Method as that laid down by Bacon; and this surprise will be heightened on learning that M. Victor Cousin is one of those writers. He says, "Let us now see what our Descartes has done. He has established in France the same Method that England has endeavored to attribute exclusively to Bacon; and he has established it with less grandeur of imagination in style, but with the superior precision which must always characterize one who, not content with laying down rules, puts them himself in practice, and gives the example with the precept."† M. Cousin then quotes the four rules we quoted from Descartes; and seeing in them Analysis and Synthesis, which he believes constitutes the sole Method of Bacon, declares that the two Methods are one. Such a statement requires no refutation; nor indeed would

* *Principia Philos.* pars iii. p. 51. The phrase, "cupimus enim rationes effectuum à causis, non autem è contrario causarum ab effectibus deducere," may be said to express the nature of his method, as opposed to the method of Bacon. When M. Jules Simon said, "The commencement of philosophy for Descartes is Doubt; that alone is all his entire method—*cela seul est toute sa Méthode*" (Introduction prefixed to his edition of Descartes, p. 3), he mistakes, as it seems to us, the whole purpose of Descartes' artificial skepticism: besides, how can ■ Doubt be a Method?

† *Hist. de la Philos.* leçon iii. p. 91, ed. Bruxelles, 1840.

it have been noticed, did it not afford an illustration of the loose way in which the term Method is employed by many writers.

Bacon was the reverse side of the medal of Descartes. Bacon's deficiencies lay in that department where Descartes was greatest—in mathematics. Hence Bacon's over-valuation of Induction, and neglect of Deduction; hence also Descartes' over-valuation of Deduction, and neglect of Induction. Both cultivated Physics; but Bacon made it the basis of all the sciences; Descartes made it a mere illustration of his principles. The one argued from effects to causes—from the known to the unknown; the other deduced effects from causes—explaining phenomena by noumena—explaining that which presented itself to the senses by that which was intuitively known. Both separated religion from philosophy; but Bacon declared the problems of religion and ontology insoluble by reason, and therefore beyond the province of science; Descartes declared them soluble *only* by reason, and that it was the first object of philosophy to solve them.

Besides these and other points of difference, there were also several points of resemblance, owing to the resemblance of their positions as reformers. They both overvalued their Methods, which they declare will enable all men to philosophize with equal justness. "It is not so essential to have a fine understanding," says Descartes, "as to apply it rightly. Those who walk slowly make greater progress, if they always follow the right road, than those who run swiftly, but run on a wrong one." This is precisely the thought of Bacon: "A cripple in the right path will beat a racer in the wrong one." But both these thinkers assume that the racer will *choose* the wrong path: whereas, if their Methods are adopted, the finer understanding must always surpass the duller in the discovery of truth.

Before quitting this subject, we must remark on the essentially metaphysical nature and tendency of the Method of Descartes, even when employed on Physics; and for this purpose we cannot do better than borrow the admirable language of Fontenelle in his parallel between Descartes and Newton. "Tous deux géo-

mètres excellents ont vu la nécessité de transporter la géométrie dans la physique . . . Mais l'un, prenant un vol hardi, a voulu se placer à la source de tout, se rendre maître des premiers principes par quelques idées claires et fondamentales, pour n'avoir plus qu'à descendre aux phénomènes de la nature comme à des conséquences nécessaires; l'autre, plus timide ou plus modeste, a commencé sa marche par s'appuyer sur les phénomènes pour remonter aux principes inconnus, résolu de les admettre, quels que les pût donner l'enchaînement des conséquences. L'un part de ce qu'il entend nettement pour trouver la cause de ce qu'il voit; l'autre part de ce qu'il voit pour en trouver la cause, soit claire, soit obscure."

§ III. APPLICATION OF THE METHOD.

To prove the existence of God was the first application of Descartes' Method; not, as some say, to prove his own existence; for that neither admitted of *logical* proof nor of disproof: it was a primary fact. Interrogating his Consciousness, he found that he had the idea of God,—understanding, by God, a substance infinite, eternal, immutable, independent, omniscient, omnipotent. This, to him, was as certain a truth as the truth of his own existence. I exist: not only do I exist, but exist as a miserably imperfect, finite being, subject to change—greatly ignorant, and incapable of creating any thing. In this, my Consciousness, I find by my finitude that I am not the All; by my imperfection, that I am not perfect. Yet an infinite and perfect being must exist, because infinity and perfection are implied, as correlatives, in my *ideas* of imperfection and finitude. God therefore exists: his existence is clearly proclaimed in my Consciousness, and can no more be a matter of doubt, when fairly considered, than my own existence. The conception of an infinite being proves his real existence; for if there is not really such a being, *I* must have made the conception; but if I could make it, I can also unmake it, which evidently is not true; therefore there must be, externally to myself, an archetype from which the conception was derived.

"The ambiguity in this case," it has been remarked,* "is the pronoun *I*, by which in one place is to be understood my *will*, in another *the laws of my nature*. If the conception, existing as it does in my mind, had no original without, the conclusion would unquestionably follow that *I* had made it—that is, the laws of my nature must have spontaneously evolved it; but that my *will* made it, would not follow. Now, when Descartes afterwards adds that I cannot unmake the conception, he means that I cannot get rid of it by an act of my will, which is true, but is not the proposition required. That what some of the laws of my nature have produced, other laws, or the same laws in other circumstances, might not subsequently efface, he would have found it difficult to establish."

His second demonstration is the weakest of the three. Indeed, it is the only one not irrefragable, upon his principles. The third demonstration is peculiarly Cartesian, and may be thrown into this syllogism :

All that we clearly and distinctly conceive as contained in any thing, is true of that thing.

Now we conceive, clearly and distinctly, that the existence of God is contained in the idea we have of him.

Ergo,

God exists.

Having demonstrated the existence of God, he had to prove the distinction between body and soul. This, to him, was easy. The fundamental attribute of Substance must be extension, because we can abstract from Substance all the qualities except extension. The fundamental attribute of Mind is thought, because by this attribute Mind is revealed to itself. Now, according to one of his logical axioms, two substances are really distinct when their ideas are complete, and in no way imply each other. The ideas, therefore, of extension and thought being distinct, it follows that Substance and Mind are distinct in essence.

We need not pursue our analysis of his metaphysical notions

* Mill's *System of Logic*, ii. 447.

further. We only stop to remark on the *nature* of his demonstrations of God and the soul. It is, and was, usual to prove the existence of God from what is called the "evidence of design." Descartes neither started from design, nor from motion, which must have a mover: he started from the *à priori* ideas of perfection and infinity; his proof was in the clearness of his idea of God. His Method was that of definition and deduction. To define the idea of God, and hence to construct the world—not to contemplate the world, and thence infer the existence of God—was the route he pursued. Is it not eminently the procedure of a mathematician? and of a mathematician who has taken Consciousness as his starting-point?

Descartes' speculations are beautiful exemplifications of his Method; and he follows that Method, even when it leads him to the wildest conclusions. His physical speculations are sometimes admirable (he made important discoveries in optics), but mostly fanciful. The famous theory of vortices deserves a mention here, as an example of his Method.

He begins by banishing the notion of a *vacuum*, not, as his contemporaries said, because Nature has a horror of vacuum, but because the essence of Substance being extension, wherever there is extension there is Substance; consequently empty space is a chimera. The substance which fills all space must be assumed as divided into equal angular parts. Why must this be assumed? Because it is the most simple, therefore the most natural supposition. This substance being set in motion, the parts are ground into a spherical form; and the corners thus rubbed off, like filings or sawdust, form a second or more subtle kind of substance. There is, besides, a kind of substance, coarser and less fitted for motion. The first kind makes luminous bodies, such as the sun and fixed stars; the second makes the transparent substance of the skies; the third kind is the material of opaque bodies, such as earth, planets, etc. We may also assume that the motions of these parts take the form of revolving circular currents, or *vortices*. By this means the matter will be collected to the centre

of each vortex, while the second or subtle matter surrounds it, and by its centrifugal effort constitutes light. The planets are carried round the sun by the motion of this vortex, each planet being at such a distance from the sun as to be in a part of the vortex suitable to its solidity and mobility. The motions are prevented from being exactly circular and regular by various causes. For instance, a vortex may be pressed into an oval shape by contiguous vortices.*

Descartes, in his physics, adopted a method which permitted him to set aside the *qualities* and the *substantial forms* (which others were seeking), and to consider only the relations of number, figure, and motion. In a word, he saw in physics only mathematical problems. This was premature. Science, in its infancy, cannot be carried on by the deductive Method alone: such a process is reserved for its maturity.

But this deductive Method, though premature, was puissant. Science is forced to employ it, and Bacon's greatest error was in not sufficiently acknowledging it. Hence we may partly account for the curious fact that Bacon, with his cautious Method, made no discoveries, while Descartes, with his premature Method, made important discoveries. Of course the greater physical knowledge of Descartes, and the greater attention bestowed by him upon physics, had something to do with this; but his Method also assisted him, precisely because his discoveries were of a kind to which the mathematical method was strictly applicable.

That Descartes had read Bacon there is no doubt. He has himself praised Bacon's works as leaving nothing to be desired on the subject of *experience*; but he perceived Bacon's deficiency, and declared that we are "liable to collect many *superfluous* experiences of particulars, and not only superfluous, but false," if we have not ascertained the truth *before* we make these expe-

* We have followed Dr. Whewell's exposition of this theory, as given by him, *Hist. of Ind. Sciences*, ii. p. 134. The curious reader will do well, however, to turn to Descartes' own exposition in the *Principia Philosophiæ*, where it is illustrated by diagrams.

riences. In other words, experiment should be the verification of an *à priori* conception; whereas Bacon teaches us to form our conceptions from experiment.

We have said enough to make the Method of Descartes appreciable. His position is that of founder of the Deductive Method on the basis of Consciousness. His scholars may be divided into the mathematical cultivators of Physics, and the deductive cultivators of Philosophy. By the first he was speedily surpassed, and his influence on them can only be regarded as an impulsion. By the second he was *continued*: his principles were unhesitatingly accepted, and only developed in a somewhat different manner.

His philosophical Method subsists in the present day. It is the Method implicitly or explicitly adopted by most metaphysicians in their speculations upon ontological subjects. Is it a good Method? The question is of the highest importance: we will endeavor to answer it.

§ IV. IS THE METHOD TRUE?

In the Dedicatory Epistle prefixed to his *Meditations*, Descartes declares that his demonstrations of the existence of God, etc., "equal, or even surpass, in certitude the demonstrations of geometry." Upon what does he found this belief? He founds it upon the very nature of certitude. Consciousness is the basis of all certitude. Whatever I am distinctly conscious of, I must be certain of; all the ideas which I find in my Consciousness, as distinctly conceived, must be true. The belief I have in my existence is derived from the fact of my Consciousness: I *think*, therefore I *exist*. Now as soon as I conceive a truth with distinctness, I am irresistibly led to believe in it; and if that belief is so firm that I can never have any reason to doubt that which I believe, I have all the certitude that can be desired.

Further: we have *no knowledge whatever of any thing external to us except through the medium of ideas*. The consequence is,

says Descartes, that *whatever we find in the ideas must necessarily be in the external things.*

It is only in our minds that we can seek whether things exist, or not. There cannot be more reality in an effect than in a cause. The external thing, being the cause of the idea, must therefore possess as much reality as the idea, and *vice versâ*. So that whatever we conceive as existent, exists.

This is the basis on which Descartes' system is erected ; if this basis be rotten, the superstructure must fall. If the root is vitiated, the tree will bear no fruit. No thinker, except Spinoza, has so clearly, so frankly stated his criterium. Let us then accept the challenge which it offers, since an opportunity is now afforded of bringing together in a narrow field the defenders and antagonists of philosophy.

If Descartes is wrong—if Consciousness is not the ultimate ground of Certitude, embracing both objective and subjective—if ideas are not the internal copies of external things—then must Philosophy be content to relinquish all claim to certitude, and find refuge again in Faith.

And Descartes *is* wrong. The very Consciousness to which he appeals, convicts him. There is this fallacy in his system: Consciousness is the ultimate ground of certitude, *for me* ; if I am conscious that I exist, I cannot doubt that I exist ; if I am conscious of pain, I must be in pain. This is self-evident. But what ground of certitude can my Consciousness afford respecting things which are *not me* ? How does the principle of certitude apply ? How far does it extend ? It can only extend to things which relate *to me*. I am conscious of all that passes within *myself* ; but I am not conscious of what passes in *not-self* : all that I can possibly know of the *not-self* is in its *effects upon me*.

Consciousness is therefore "cabin'd, cribb'd, confined" to *me*, and to what passes within *me* ; so far does the principle of certitude extend, and no farther. Any other ideas we may have, any knowledge we may have respecting *not-self*, can only be founded on *inferences*. Thus, I burn myself in the fire : I

am conscious of the sensation; I have certain and immediate knowledge of that. But I can only be certain that a change has taken place in my consciousness; when from that change I *infer* the existence of an external object (the fire), my inference *may* be correct, but I have obviously shifted my ground; Consciousness—my principle of certitude—forsakes me here: I go out of myself to infer the existence of something which is not-self. My knowledge of the sensation was *immediate*, indubitable. My knowledge of the object is *mediate*, uncertain.

Directly therefore we leave the ground of Consciousness for that of inference, avenues of doubt are opened. Other inferences can be brought to bear upon any one inference to illustrate or to refute it. The mathematical certainty which Descartes attributed to these inferences becomes a great uncertainty. He says we only know things through the medium of ideas. We will accept the proposition as unquestionable. But then he also says that, in consequence of this, *whatever we find in the ideas must necessarily be true of the things*. The reason is, that as ideas are caused in us by objects, and as every effect must have as much reality as the cause—the effect being *equal* to the cause—so must ideas have the same reality as things. But this is a double fallacy. In the first place, an effect is not *equal* to its cause; it is a mere consequent of an antecedent, having no such relation as *equality* whatever. In the second place, the use of the term “reality” is ambiguous. Unquestionably an effect *really* exists; but reality of existence does not imply *similarity of modes* of existence. The burn occasioned by a fire is as *real* as the fire; but it in no way *resembles* the fire.

So when Descartes says that what is true of ideas must be true of things, he assumes that the mind is a *passive* recipient—a mirror, in which things reflect themselves. This is altogether fallacious; the mind is an *active* co-operator in all sensation—sensation is a *consciousness of changes operated in ourselves*, not a *consciousness of the objects causing those changes*. In truth, so far from our being able to apprehend the nature of things ex-

ternal to us, there is an impenetrable screen forever placed before our eyes, and that impenetrable screen is the very Consciousness upon which Descartes relies. When placed in contact with external objects, they operate upon us; their *operations* we know, *themselves* we cannot know; precisely because our knowledge of them is *mediate*, and the medium is our Consciousness. Into whatever regions we wander, we carry with us this Consciousness, by means of which, indeed, we know, but all we know, is—*ourselves*.

Knowledge is composed of Ideas. Ideas are the joint product of mind on the one hand, and of external causes on the other; or rather we may say that Ideas are the products of mind excited by external causes. Upon what principles of inference (since we are here on the ground of inference) can you infer that the ideas excited are *copies* of the exciting causes—that the ideas excited apprehend the whole nature of the causes? The cause of the fallacy is in that very strong disposition to give objectivity to a law of the mind; in consequence of which we often hear people declare that something they are asserting is “involved in the idea.”

There is one mode of escape left for those who believe in the validity of ontological speculations: namely, to assert the existence of *Innate Ideas*, or—as the theory is generally stated in modern times—of *Necessary Truths* independent of all experience. If the idea of God, for example, be innate in us, it is no longer a matter of inference, but of Consciousness; and on such an hypothesis Descartes is correct in believing that the certainty of this idea equals the certainty of geometry.

But some maintain that he did not assert the existence of *Innate Ideas*, though, from its having been a doctrine maintained by his followers, it is usually attributed to him. Dugald Stewart quotes the following passage from Descartes in reply to his adversaries, who accused him of holding the tenet of *Innate Ideas*: —“When I said that the idea of God is innate in us, I never meant more than this, that *Nature has endowed us with a facul-*

ty by which we may know God ; but I have never either said or thought that such ideas had an actual existence, or even that they were a *species* distinct from the faculty of thinking. . . . Although the idea of God is so imprinted on our minds that every person has within himself the faculty of knowing Him, it does not follow that there may not have been various individuals who have passed through life without making this idea a distinct object of apprehension ; and, in truth, they who think they have an idea of a plurality of Gods have no idea of God whatever."

From this it would appear that he did not hold the doctrine of Innate Ideas. But we must venture to dissent from the conclusion drawn by Dugald Stewart on the strength of such a passage ; against that passage we will bring another equally explicit (we could bring fifty, if necessary), which asserts the existence of Innate Ideas. "By the word *idea*," he says, "I understand all that can be in our thoughts ; and I distinguish three sorts of ideas :—*adventitious*, like the common idea of the sun ; *framed* by the mind, such as that which astronomical reasoning gives of the sun ; and *innate*, as the idea of God, mind, body, a triangle, and generally all those which represent true, immutable, and eternal essences."* This last explanation is distinct ; and it is all that the serious antagonists of Innate Ideas have ever combated. If Descartes, when pressed by objections, gave different explanations, we may attribute that to the want of a steady conception of the vital importance of Innate Ideas in his system. The fact remains that Innate Ideas form the necessary groundwork of the Cartesian doctrine.

Although the theory of Innate Ideas may, in its Cartesian form, be said to be exploded, it does really continue to be upheld, under a new form. A conviction of the paramount necessity of some such groundwork for metaphysical speculation has led to the modern theory of *Necessary Truths*. This plausible theory has been adopted by Dr. Whewell in his *Philosophy of the In-*

* *Lettres de Descartes*, liv.

ductive Sciences; but his arguments have been completely shattered by John Mill on the one hand, and by Sir John Herschel on the other.*

The basis of all modern ontological speculations lies in the assumption that we have *ideas independent of experience*. Experience can only tell us of ourselves, or of phenomena; of noumena it can tell us nothing. That we have no ideas independent of experience has been clearly enough established in the best schools of psychology; but the existence of metaphysical speculation proves that the contrary opinion still finds numerous upholders.†

The fundamental question then of modern Philosophy was this: Have we any Ideas independent of Experience? And the attempt to solve it will occupy the greater portion of our history. Before entering upon it we must exhibit the Method of Descartes, pushed to its ultimate conclusions in Spinoza.‡

* *System of Logic*, book ii. ch. v.; and *Quarterly Review*, June, 1841; indeed, Dr. Whewell's arguments had been anticipated and refuted by Locke long before. See *Essay*, book iv. ch. 6, 7.

† See the question discussed further on: Epoch VIII. § v.

‡ The best modern works on Descartes, apart from regular Histories of Philosophy, are M. Francoisque Boullier's *Histoire et Critique de la Révolution Cartésienne*, Paris, 1842; M. Ch. Renouvier's *Manuel de la Philos. Moderne*, Paris, 1841; and Feuerbach's *Geschichte der neuern Philosophie*, Leipzig, 1847. The best edition of Descartes' works is that by Victor Cousin, in eleven vols., 8vo., Paris, 1826. M. Jules Simon has also published a cheap and convenient edition, in one volume, of the *Discourse on Method*, the *Meditations*, and the *Treatise on the Passions*, Paris, 1844. Both of these have been excellently translated into English (Edinburgh, 1853).

CHAPTER II

SPINOZA.

§ I. SPINOZA'S LIFE.

EARLY in the seventeenth century, on a fair evening of summer, a little Jewish boy was playing with his sisters on the Burg-wall of Amsterdam, close to the Portuguese synagogue. His face was mild and ingenious; his eyes were small, but bright, quick, and penetrative; and the dark hair floated in luxuriant curls over his neck and shoulders. Noticeable, perhaps, for his beauty and joyousness, the little boy played amongst the active citizens of that active town. The Dutch then occupied the thoughtful attention of all Europe. After having first conquered for themselves firm footing on this earth, by rescuing their country from the sea, they had thrown off the oppressive yoke of Spain; and had now conquered for themselves a freedom from a far greater tyranny, the tyranny of thought.

Amsterdam was noisy with the creaking of cordage, the bawling of sailors, and the busy trafficking of traders. The Zuyder Zee was crowded with vessels laden with precious stores from all quarters of the globe. The canals which ramify that city, like a great arterial system, were blocked up with boats and barges: the whole scene was vivid with the greatness and the littleness of commerce. Heedless of all this turmoil, as unheeded in it—heedless of all those higher mysteries of existence, the solution of which was hereafter to be the endeavor of his life—untouched by any of those strange questions which a restless spirit cannot answer, but which it refuses to have answered by others—heedless of every thing but his game, the little boy played merrily with his sisters. That boy was Benedict Spinoza.

It is a pleasant thing to think of Spinoza as a boy, playing at boyish games. He has for so long been the bugbear of theologians and timid thinkers; he has for so long been looked upon as a monster, an atheist, and (to add to the horror), a Jewish atheist; and looked upon, even by those who were not so aghast at the consequences of his system, as nothing more than a frigid logician, that we dwell with singular pleasure on any more *human* aspect of his character. We hope, ere we have done, to convince the reader that this rigorous logician was a wise, virtuous, and affectionate man.

His parents were honest merchants of Amsterdam, who had settled there in company with a number of their brethren, on escaping the persecution to which all Jews were subject in Spain. The young Baruch* was at first destined to commerce; but his passion for study, and the precocity of his intellect, made his parents alter their resolution in favor of a rabbinical education: a resolution warranted by sickliness of constitution, which had increased his love of study. The sickly child is mostly thoughtful: he is thrown upon himself and his own resources; he suffers, and asks himself the cause of his pains, asks himself whether the world suffers like him; whether he is one with nature, and subject to the same laws, or whether he is apart from it, and regulated by distinct laws. From these he rises to the awful questions—Why? Whence? and Whither?

The education of the Jews was almost exclusively religious, the Old Testament and the Talmud forming their principal studies. Spinoza entered into them with a fanatical zeal, which, backed as it was by remarkable penetration and subtlety, won the admiration of the Chief Rabbini, Saul Levi Morteira, who became his guide and instructor. Great indeed were the hopes entertained of this youth, who at fourteen rivalled almost all the doctors in **the** exactitude and extent of his biblical knowledge.

* Baruch was Spinoza's Hebrew name, which he himself translated into Latin as Benedictus; from which some have erroneously supposed that he embraced Christianity, whereas he only renounced Judaism.

But these hopes were turned to fears, when they saw that young and pertinacious spirit pursue his undaunted inquiries into whatever region they conducted him, and found him putting difficulties to them which they, Rabbins and philosophers, were unable to solve.

Spinoza was to be deterred neither by threats nor by sophistications. He found in the Old Testament no mention of the doctrine of immortality: there was complete silence on the point.* He made no secret of his opinions; and two of his schoolfellows, irritated at his intellectual superiority, or else anxious to curry favor with the Rabbins, reported his heresy with the usual fertility of exaggeration. Summoned to appear before the Synagogue, he obeyed with a gay carelessness, conscious of his innocence. His judges, finding him obstinate in his opinions, threatened him with excommunication: he answered with a sneer. Morteira, informed of the danger, hastened to confront his rebellious pupil; but Spinoza remained as untouched by his rhetoric as he was unconvinced by his arguments. Enraged at this failure, Morteira took a higher tone, and threatened him with excommunication, unless he at once retracted. His pupil was irritated, and replied in sarcasms. The Rabbini then impetuously broke up the assembly, and vowed "only to return with the thunderbolt in his hand."

In anticipation of the threatened excommunication, Spinoza wisely withdrew himself from the Synagogue—a step which profoundly mortified his enemies, as he thereby rendered futile all intimidations which had been employed against him, particularly the otherwise terrible excommunication; for what terror could such a sentence inspire in one who voluntarily absented himself from the society which pretended to exclude him?

Dreading his ability, and the force of his example, the Synagogue made him an offer of an annual pension of ■ thousand

* On this silence Warburton endeavored to establish the divinity of the Legation of Moses; and Bishop Sherlock has exerted considerable ingenuity in explaining the discrepancy which skeptics had seized hold of as an argument in their favor.

florins, if he would only consent to be silent, and assist from time to time at their ceremonies. Spinoza, indignant at such an attempt to palter with his conscience, refused it with scorn. One evening, as he was coming out of the theatre, where he had been relaxing his overtaken mind, he was startled by the fierce expression of a dark face, thrust eagerly before his. The glare of bloodthirsty fanaticism arrested him; a knife gleamed in the air, and he had barely time to parry the blow. It fell upon his chest, but, fortunately deadened in its force, only tore his coat. The assassin escaped. Spinoza walked home thoughtful.*

The day of excommunication at length arrived; and a vast concourse of Jews assembled to witness the awful ceremony. It began by the solemn and silent lighting of a quantity of black wax candles, and by opening the tabernacle wherein were deposited the Books of the Law of Moses. Thus were the dim imaginations of the faithful prepared for all the horror of the scene. Morteira, the ancient friend and master, now the fiercest enemy of the condemned, was to order the execution of the sentence. He stood there, pained, but implacable; the people fixed their eager eyes upon him. High above, the chanter rose and chanted forth, in loud, lugubrious tones, the words of execration; while from the opposite side another mingled with these curses the thrilling sounds of the trumpet; and now the black candles were reversed, and were made to melt, drop by drop, into a huge tub filled with blood. This spectacle—a symbol of the most terrible faith—made the whole assembly shudder; and when the final *Anathema Maranatha!* were uttered, and the lights all suddenly immersed in the blood, a cry of religious horror and execration burst from all; and in that solemn darkness, and to those solemn curses, they shouted Amen, Amen!

Thus was the young truth-seeker expelled from his commu-

* Some of the biographers contradict Bayle's statement of the assassination being attempted as Spinoza was leaving the theatre, and declare that he was coming from the Synagogue; but they forget that he had entirely renounced going there, and this was the probable motive of the assassin.

nity, his friends and relations forbidden to hold intercourse with him. Like the young and energetic Shelley, who afterwards imitated him, he found himself an outcast in this busy world, with no other guides through its perplexing labyrinths than sincerity and self-dependence. Two or three new friends soon presented themselves; men who warred against their religion as he had warred against his own; and a bond of sympathy was forged out of a common injustice. Here again we trace a resemblance to Shelley, who, discountenanced by his relations, sought amongst a few skeptical friends to supply the affections he was thus deprived of. Like Spinoza, he too had only sisters, with whom he had been brought up. No doubt, in both cases, the consciousness of sincerity, and the pride of martyrdom, were great sustainments in this combat with society. They are always so; and it is well that they are so, or the battle would never be fought; but they never entirely replace the affections. Shut out from our family, we may seek a brotherhood of apostasy; but these new and precarious intellectual sympathies are small compensation for the loss of the emotional sympathies, with all their links of association, and all their memories of childhood.

Spinoza must have felt this, and, to fill the void of his yearning heart, he sought the daughter of his friend and master, Van den Ende, as his wife.

This Van den Ende had some influence on Spinoza's life. He was a physician in Amsterdam, who conducted a philological seminary with such success, that all the wealthy citizens sent him their sons; but it was afterwards asserted, that to every dose of Latin he added a grain of atheism. He undertook to instruct Spinoza in Latin, and to give him board and lodging, on condition that he should subsequently aid him in instructing his scholars. This Spinoza accepted with joy; for although master of the Hebrew, German, Spanish, Portuguese (and of course Dutch) languages, he had long felt the urgent necessity of Latin.

Van den Ende had a daughter; her personal charms were equivocal, but she was thoroughly versed in Latin, and was an

accomplished musician. The task of teaching young Benedict generally fell to her: and as a consequence the pupil soon became in love with the tutor. We often picture this courtship as a sort of odd reverse of Abelard and Heloise. Spinoza we fancy not inattentive to the instruction, but the more in love with it coming from so soft a mouth: not inattentive, yet not wholly absorbed. He watches her hand as it moves along the page, and longs to squeeze it. While "looking out" in the dictionary, their hands touch—and he is thrilled; but the word is *found*, nevertheless. The lesson ended, he ventures on a timid compliment, which she receives with a kind smile; but the smile is lost, for the bashful philosopher has his eyes on the ground; when he raises them, it is to see her trip away to household duties, or to another pupil: and he looks after her sighing. But, alas for maidenly discernment! our female Abelard was more captivated by the showy attractions of a certain Kerkering, a young Hamburg merchant, who had also taken lessons in Latin and love from the fair teacher; and who, having backed his pretensions by the more potent seductions of pearl necklaces, rings, etc., quite cast poor Benedict into the shade, who then turned from love to philosophy.

His progress in Latin had, however, been considerable; he read it with facility, and found it invaluable in his philosophical studies, especially as the works of Descartes now fell into his hands: these he studied with intense avidity, feeling that a new world was therein revealed. The laws of the ancient Jewish doctors expressly enjoin the necessity of learning some mechanical art, as well as the study of the law. It was not enough, they said, to be a scholar—the means of subsistence must also be learned. Spinoza had accordingly, while belonging to the Synagogue, learnt the art of polishing glasses for telescopes, microscopes, etc., in which he arrived at such proficiency that Leibnitz, writing to him, mentioned, "Among the honorable things which fame has acquainted me with respecting you, I learn with no small interest that you are a clever optician." By polishing

glasses he gained a subsistence—humble, it is true, but equal to his wants. To this he joined, by way of relaxation, the study of design, and soon became very expert. Colérus had a portfolio of portraits of several distinguished men, sketched by him; and one among them was a portrait of himself, in the dress of Masaniello.*

In his eight-and-twentieth year Spinoza left his natal city of Amsterdam, and resolving to devote his life to study, retired to Rhynsburg, near Leyden, where, still pursuing his trade as a glass-polisher, he devoted every spare hour to philosophy. The fruits of his solitude were the *Abridgment of the Meditations of Descartes*, with an Appendix, in which he first disclosed the principal points of his own system. This is a very interesting work. It contains the most accurate and comprehensible account of Descartes ever written; and the Appendix is curious, as containing the germ of the *Ethica*. It made a profound sensation; and when, the following year, he removed to Woorburg a small village near the Hague, his reputation attracted to him a great concourse of visitors. Many enmities were excited amongst the disciples of Descartes, by the exposition of the weak points of their master's system; and Spinoza had to suffer their rude attacks in consequence. But the attention of all thinking men was fixed upon him; and the clearness and precision of his work won him admiration. So many new friendships did he form, that he at last yielded to the numerous solicitations that he should come and live entirely at the Hague. It was not the learned alone who sought his friendship; men of rank in public affairs were also numbered amongst them. Of the latter we may mention the celebrated Jan de Witt, who loved Spinoza, and profited by his advice in many an emergency. The great Condé also, during the invasion of Holland by the French, sent to de-

* "Your enemies have not failed to assert that by that you pretended to show that you would create in a little while the same uproar in Christianity that Masaniello created in Naples."—*Rencontre de Bayle avec Spinoza dans l'autre Monde*. 1711.

sire Spinoza to come and see him. The Philosopher obeyed, but the Prince was prevented from keeping his appointment—to his own loss. This journey was very near proving fatal to Spinoza. The populace having learned that he had been in communication with the enemy, began to suspect him of being a spy. His landlord, alarmed at these reports, warned him of them; he feared, he said, that the populace would attack the house. "Fear nothing," replied Spinoza, calmly; "it is easy for me to justify myself, and there are persons enough who know the object of my journey; but whatever may arrive, as soon as the people assemble before your door, I will go out and meet them, even though I should share the fate of De Witt." The same calm courage which made him proclaim the truth, now made him ready to confront the infuriated populace. Fortunately all passed off in peace, and he was left to his studies. Karl Ludwig, anxious to secure so illustrious a thinker, offered him the vacant chair of Philosophy at Heidelberg, which, however, Spinoza could not accept, conscious that the philosophy he would teach was too closely allied to theology not to trench on its dogmas; and the Elector had expressly stipulated that he should teach nothing which could prejudice the established religion. He therefore begged to decline it, as his public duties would interfere with his private meditations. Yet it was both a lucrative and honorable post he refused; but a philosophical contempt for worldly honors was amongst his characteristics.

It is invigorating to contemplate Spinoza's life. Dependent on his own manual exertions for his daily bread, limited in his wants, and declining all pecuniary assistance so liberally offered by his friends, he was always at ease, cheerful, and occupied. There is an heroic firmness traceable in every act of his life; there is a perpetual sense of man's independence, worthy all imitation. He refuses to accept the belief of another man—he will believe for himself; he sees mysteries around him, awful, inexplicable; but he will accept of no man's explanation. God has given him a soul, and with that he will solve the problem, or

remain without a solution. He leaves the Synagogue; he leaves Descartes; he thinks for himself. In a far subordinate sphere he will also assert his independence. Having but the most miserable pittance, and with the purses of his friends open to him, he preferred limiting his desires to accepting their bounties. He preferred working and gaining his own subsistence, so long as it was to be gained. This was no crotchet, neither was it ignoble calculation. The friends were sincere, their offers were sincere: he knew it, but thanked them, and declined. The heritage, which on his father's death fell to his lot, he resigned to his sisters. The large property which his friend Simon de Vries had announced his intention of leaving him, he would not consent to accept, but made Simon alter his will in favor of his brother, at Schiedam. The pension offered him if he would dedicate his next work to Louis XIV., he refused, "having no intention of dedicating any thing to that monarch." He was indebted to no one but to God; who had given him talents, and energy to make those talents available, not to let them and him rot in idleness, or in ignoble dependence, while all the world had to toil.*

Yet it was a hard, griping poverty that he endured. On looking over his papers after his death, they found accounts of his expenditure. One day he ate nothing but a *soupe au lait*, with a little butter, which cost about three halfpence, and a pot of beer, which cost three farthings more. Another day he lived on a basin of gruel, with some butter and raisins, which cost him twopence halfpenny; "And," says the pastor Colérus, "although often invited to dinner, he preferred the scanty meal that he found at home, to dining sumptuously at the expense of another." This was the man who was, by his contemporaries, branded with the names of Atheist and Epicurean; and who has borne these

* It was in a man's own energy that he saw the germ of worth and greatness, and wisely ridiculed the notion of patronage in this noteworthy passage: "Governments should never found academies, for they serve more to oppress than to encourage genius. The unique method of making the arts and sciences flourish, is to allow every individual to teach what he thinks, at his own risk and peril."—*Tract. Polit.* c. 8, § 49.

names forever after through all Europe, excepting only Germany. While on the one hand no man was perhaps ever more filled with religion (so that Novalis could call him a "God-intoxicated man"), on the other hand his Epicureanism, at twopence-half-penny sterling per diem, stands a legible charge against him.

The publication of his *Tractatus Theologico-Politicus* was an event of some importance, both in the history of philosophy and of Spinoza. The state of men's minds at that period was not favorable to the reception of any great philosophical system; and Spinoza found himself obliged to prepare the way for his future doctrines, by examining the nature of that ecclesiastical power which could excite at will such violent perturbation in the State, and by examining also the foundations on which that power reposed. This great question still agitates mankind; and it is as curious as instructive to observe that the late orthodox and estimable Dr. Arnold taught a doctrine precisely similar to that taught by the heretical and persecuted Spinoza.*

Times were troubled. Holland, it is true, was reposing on her laurels, won in the long and desperate struggle against Spain. Having freed herself from a foreign yoke, she had, one would fancy, little now to do but to complete her canals, extend her commerce, and enjoy her peace. But this land of political freedom—this ark of refuge for the persecuted of all nations—the republic whose banner was freedom, and in whose cities European freethinkers published their works—was disturbed by theological faction. The persecuted Jews might flock from Spain and Portugal, the synagogue might rear itself beside the church; the Protestants of France and Belgium were welcome as brothers and citizens; but, arrived there, the fugitives might witness, even there, the implacable war of party. Toleration was afforded to political freethinking, and to the diversities of religion; but, within the pale of the State religion, malice and all uncharitableness were daily witnessed. There the Gomarists

* Compare Arnold, *Introductory Lectures on Modern History*: Appendix to the first Lecture.

and Arminians disputed concerning the infallibility of their doctrines, and cloaked their political ambition under evangelical protestations.*

This was the state of things on the appearance of the *Tractatus*. Spinoza, seeing the deplorable dissensions of the theologians, endeavored to make evident the necessity of a State religion, which, without absolutely imposing, or interfering with, private creeds, should regulate all outward observances. Because, as it is the office of the State to watch over all that concerns the common welfare, so should it watch over the Church, and direct it according to the general wish. But two things perfectly distinct must not here be confounded, viz. liberty of observance and liberty of thought. The latter is independent of all civil power; but the former must be subject to it, for the sake of the public tranquillity.

Although this portion of the *Tractatus* could not have met with general approbation, yet it would scarcely have raised violent dissensions, had Spinoza confined himself to such speculation; but, anticipating the rationalism of modern Germans, he undertook a criticism of the Bible, and attacked the institution of priesthood as injurious to the general welfare. It is curious to notice Spinoza's anticipation of the Hegelian Christology, which, in the hands of Strauss, Feuerbach, and Bruno Bauer, has made so much noise in the theological world:—"I tell you," says Spinoza, in his letter to Oldenburg, "that it is not necessary for your salvation that you should believe in Christ according to the flesh; but of that eternal son of God, *i. e. eternal wisdom of God*, which is manifested in all things, but mostly in the *human mind*, and most of all in *Jesus Christ*, a very different conception must be formed."—"Dico ad salutem non esse omninò necesse, Christum, secundum carnem noscere, sed de æterno illo filio Dei, hoc est, Dei æternâ sapientiâ, quæ sese in omnibus rebus, et maximè in mente humanâ et omnium maximè in

* Saintes, *Histoire de la Vie de Spinoza*, p. 68.

Christo Jesu manifestavit, longè aliter sentiendum.”* The consequences were as might have been expected: the book was at once condemned, and forbidden to be received in almost every country. This, as usual, only gave a greater stimulus to curiosity, and the sensation the work produced may be judged of by the quantity of “refutations” which appeared. Many were the artifices used to introduce it into the various countries. An edition was published at Leyden, under this title: *Dan. Hensii Operum Historicorum collectio prima. Edit. II., priori editione multo emendatior et auctior; accedunt quædam hactenus inedita.* This was reprinted at Amsterdam as *Henriquez de Villacorta, M. Dr. a Cubiculo Philippi IV., Caroli II., Archiatri Opera chirurgica omnia, sub auspiciis potentissimi Hispaniarum Regis.* This absurd title was adopted to pass it into Spain. Another edition in French, called *La Clef du Sanctuaire*, was published at Leyden in 1678, and in Amsterdam as *Traité des Cérémonies des Juifs*, and again as *Réflexions curieuses d'un Esprit désintéressé.*

Spinoza's devotion to study, with its concurrent abstemiousness and want of exercise, soon undermined his constitution; but he never complained. He suffered that, as he had suffered every thing else—in silence. Once, only, a hint escapes him. “If my life be continued,” he writes to a friend respecting a promise to explain certain matters. No plaint—no regret—merely a condition put upon a promise. He was a calm, brave man; he could confront disease and death, as he had confronted poverty and persecution. Bravery of the highest kind distinguished him through life, and it was not likely to fail him on the quitting it; and yet beneath that calm, cold stoicism, there was a childlike gayety springing from a warm and sympathizing heart. His character was made up of generous simplicity and heroic forbearance. He could spare somewhat from even his scanty pittance to relieve the wretched. He taught the learned

* *Opera Posthuma*, p. 450.

world the doctrines he had elaborated with endless toil; but he taught children to be regular in their attendance on divine service. He would question his host and hostess, on their return from church, respecting the sermon they had heard, and the benefit they had derived. He had no unwise proselytism which would destroy convictions in minds unfitted to receive others. One day his hostess asked him if he believed that she would be saved by her religion. He answered, "Your religion is a good one—you ought not to seek another, nor doubt that yours will procure your salvation, provided you add to your piety the tranquil virtues of domestic life." Words full of wisdom, springing from an affectionate and experienced mind.

So lived the Jew, Spinoza. So he developed his own nature, and assisted the development in others. Given up to philosophy, he found in it "the true medicine of the soul" of which Cicero speaks.* His only relaxations were his pipe, receiving visitors, chatting to the people of his house, and watching spiders fight. This last amusement would make the tears roll down his cheeks with laughter.

The commencement of the year 1677 found him near his end. The phthisis, which he had suffered from for twenty years, now alarmingly increased. On Sunday, the 22d February, he insisted on his kind host and hostess leaving him, and attending divine service, as he would not permit his illness to obstruct their devotions. They obeyed. On their return he talked with them about the sermon, and ate some broth with a good appetite. After dinner his friends returned to church, leaving the physician with him. When they came home they learned, with sorrow and surprise, that he had expired about three o'clock, in the presence of the physician, who seized what money there was on the table, together with a silver-handled knife, and left the body without further care. So died, in his forty-fifth year, in the full vigor and maturity of his intellect, Benedict Spinoza. "Offer

* Cicero, *Tusc.* iii. 6. Compare also the fine saying of Giordano Bruno (p. 393).

up with me a lock of hair to the manes of the holy but repudiated Spinoza!" exclaims the pious Schleiermacher. "The great spirit of the world penetrated him; the Infinite was his beginning and his end; the universe his only and eternal love. He was filled with religion and religious feeling; and therefore it is that he stands alone, unapproachable; the master in his art, but elevated above the profane world, without adherents, and without even citizenship."*

§ II. SPINOZA'S DOCTRINE.

The system of Spinoza, which has excited so much odium, is but the logical development of the system of Descartes which has excited so much admiration. Curious! The demonstration of the existence of God was one of Descartes' proudest laurels; the demonstration of the existence of God—and of no other existence being possible—condemned Spinoza to almost universal execration.

Dugald Stewart, generally one of the most candid of men, evidently shared the common prejudice with respect to Spinoza. He refuses therefore to admit that Spinoza, whom he dislikes, held opinions at all similar to those of Descartes, whom he admires. "It was in little else," says he, "than his *physical principles* that he agreed with Descartes; for no two philosophers ever differed more widely in their metaphysical and theological tenets. Fontenelle characterizes his system as Cartesianism pushed to extravagance." This is far from correct. Spinoza differed with Descartes on a few points, and agreed with him on most; the differences were only those of a more rigorous logical development of the principles both maintained.

It was at an important era in Spinoza's life that the writings of Descartes fell in his way. He was then striving to solve for himself the inexplicable riddle of the universe. He had studied with the learned Morteira; but though wise in all the wisdom

* Schleiermacher, *Rede über die Religion*, p. 47.

of the Jews, he was still at an immeasurable distance from the desired solution. Descartes captivated him by the boldness of his logic, and by the independent nature of his Method, whereby truth was sought in the inner world of man, not in the outward world, nor in the records of authority. He studied Descartes with avidity; but he soon found that there also the riddle remained unsolved. He found the fact of his own existence somewhat superfluously established; but the far greater existence in which his own was included—of which the great All was but a varied manifestation—of this he found no demonstration. *Cogito, ergo sum*, is irresistible. *Cogito, ergo Deus est*, is no basis for philosophy.

Spinoza therefore asked himself—What is the *noumenon* which lies beneath all *phenomena*? We see everywhere transformations perishable and perishing; yet there must be something beneath, which is imperishable, immutable; what is it? We see a wondrous universe peopled with wondrous beings, yet none of these beings exist *per se*, but *per aliud*: they are not the authors of their own existence; they do not rest upon their own reality, but on a greater reality—on that of the τὸ ἔν καὶ τὸ πᾶν. What is this reality?

The question, Spinoza thought, could not be answered by the idea of Perfection. No: the great reality of all existence is Substance. Not Substance in the gross and popular sense of “body” or “matter,” but the *substans*—that which is standing under all phenomena, supporting and giving them reality. What is a phenomenon? An appearance, a thing perceived: a state of the perceiving mind. But what originates this perception—what changes the mind from its prior to its present state? *Something*, external and extrinsic, changes it. What is this something? What it *is*, in itself, we can never know: because to know it would bring it under the forms and conditions of the mind, *i. e.* would constitute it a phenomenon:—unknown, therefore, but not denied—this *ens*—this something, *is*; and this, which Kant calls *noumenon*, Spinoza calls Substance.

All philosophy, as all existence, must start from *one* principle, which must be the ground of all. What is this commencement—this ἀρχή? Perfection, replies Descartes. No, says Spinoza, Perfection is an attribute of something prior to it. Substance is the ἀρχή. Descartes, in common with most philosophers, had assumed a duality: he had assumed a God, and a world created by God. Substance, to him, was by no means the primal fact of all existence; on the contrary, he maintained that both Extension and Thought were Substances; in other words, that mind and matter were distinct independent Substances, different in essence, and united only by God. Spinoza affirmed that both Extension and Thought were nothing more than Attributes; and by a subtle synthesis he reduced the duality of Descartes to an all-embracing unity, and thus arrived at a conception of the One.

The absolute Existence—the Substance—(call it what you will) is God. From Him all individual concrete existences arise. All that exists, exists in and by God; and can only thus be conceived. Here then the mystery of the world begins to unfold itself to the patient thinker; he recognizes God as the fountain of life; he sees in the universe nothing but the manifestation of God; the finite rests upon the bosom of the infinite; the inconceivable variety resolves itself into unity. There is but one reality, and that is God.

Such was Spinoza's solution of the problem: upon this he felt he could repose in peace, and upon this only. To live with God—to know God with perfect knowledge, was the highest point of human development and happiness; and to this he consecrated his life. Taking the words of St. Paul, "In Him we live, move, and have our being," as his motto, he undertook to trace the relations of the world to God and to man, and those of man to society.

Spinoza agreed with Descartes in these three vital positions.—I. The basis of all certitude is Consciousness. II. Whatever is clearly perceived in Consciousness must therefore be necessari-

ly true; and distinct ideas are true ideas, true expressions of objective existences. III. Consequently metaphysical problems are susceptible of mathematical demonstration.

The only novelty in Spinoza's Method is, that it is a further development of the Method of Descartes. Descartes thought that the mathematical Method was capable of being applied to metaphysics, but he did not apply it; Spinoza did apply it. This may seem a trifling addition: in reality it was the source of all the differences between Spinoza and his teacher. Descartes' principles will inevitably lead to Spinoza's system, if those principles are rigorously carried out. But Descartes never attempted the rigorous deduction of those consequences, which Spinoza, using the mathematical method, calmly and inflexibly deduced. Those who rebel at the conclusions drawn, must impugn the premises from which they are drawn; for the system of Spinoza is neither more nor less than a demonstration.

To this demonstration we are about to lead our readers, and only beg of them a little steady attention and a little patient thought, convinced that they will then have little difficulty in finding their way. We shall translate some portions of the *Ethica* with the utmost care, because we think it every way advisable that the reader should have Spinoza's own mode of statement, and thereby be enabled to watch his manner of deducing his conclusions from his premises. The work opens with eight

DEFINITIONS.

- I. By a thing which is its own Cause I understand a thing, the essence of which involves existence; or the nature of which can only be considered as existent.*
- II. A thing finite is that which can be limited (*terminari potest*) by another thing of the same nature, *e. g.* body is said

* This is an important definition, as it gets rid of the verbal perplexity hitherto felt relative to an "endless chain of causes." The doubter might always ask the cause of the first cause in the series; but here, by identifying cause and existence, Spinoza annihilates the difficulty

to be finite because it can always be conceived as larger. So thought is limited by other thoughts. But body does not limit thought, nor thought limit body.

- III. By Substance I understand that which exists in itself, and is conceived *per se*: in other words, the conception of which does not require the conception of any thing else antecedent to it.
- IV. By Attribute I understand that which the mind perceives as constituting the very essence of Substance.
- V. By Modes I understand the accidents (*affectiones*) of Substance; or that which is in something else, through which also it is conceived.
- VI. By God I understand the Being absolutely infinite, *i. e.* the Substance consisting of infinite Attributes, each of which expresses an infinite and eternal essence.

Explanation: I say absolutely infinite, but not infinite *suo genere*; for to whatever is infinite only *suo genere*, we can deny infinite Attributes; but that which is absolutely infinite includes in its essence every thing which implies essence, and involves no negation.

- VII. That thing is said to be free which exists by the sole necessity of its nature, and by itself alone is determined to action. But that thing is necessary, or rather constrained, which owes its existence to another, and acts according to certain and determinate causes.
- VIII. By Eternity I understand Existence itself, in as far as it is conceived necessarily to follow from the sole definition of an eternal thing.

These are the Definitions: they need not long be dwelt on, although frequently referred to by him; above all, no objection ought to be raised against them, as unusual or untrue, for they are the meanings of various terms in constant use with Spinoza, and he has a right to use them as he pleases, provided he does not afterwards depart from this use, which he is careful not to do. We now come to the seven axioms.

AXIOMS.

- I. Every thing which is, is in itself, or in some other thing.
- II. That which cannot be conceived through another (*per aliud*) must be conceived through itself (*per se*).
- III. From a given determinate cause the effect necessarily follows; and *vice versâ*, if no determinate cause be given, no effect can follow.
- IV. The knowledge of an effect depends on the knowledge of the cause, and implies it.
- V. Things that have nothing in common with each other cannot be understood by means of each other, *i. e.* the conception of one does not involve the conception of the other.
- VI. A true idea must agree with its object (*idea vera debet cum suo ideato convenire.*)
- VII. Whatever can be clearly conceived as non-existent, does not, in its essence, involve existence.

These axioms at once command assent, if we except the fourth, which, because the wording is ambiguous, has been sometimes thought absurd; but the truth is, that the opposite conceptions now prevalent respecting cause and effect prevent a real appreciation of this axiom. Mr. Hallam goes so far as to say, "It seems to be in this fourth axiom, and in the proposition grounded upon it, that the fundamental fallacy lurks. The relation between a cause and effect is surely something perfectly different from our perfect comprehension of it, or indeed from our having any knowledge of it at all; much less can the contrary assertion be deemed axiomatic."* There is a want of subtlety in this criticism, as well as a want of comprehension of Spinoza's doctrines; and we wonder it never suggested itself to Mr. Hallam that the modern notions of cause and effect do not correspond with the Spinozistic notions. In the above axiom it is not meant that there are no effects manifested to us of which we

* Introduction to *Literature of Europe*, iv. 246.

do not also know the causes—it is not meant that a man receiving a blow in the dark is not aware of that blow (effect), though ignorant of the immediate cause. What is meant is, that a complete and comprehensive knowledge of the effect is only to be obtained through a complete and comprehensive knowledge of the cause. If you would know the effect in its totality—in itself—you must know also the cause in its totality. This is obvious: for what is an effect?—an effect is a cause realized: it is the *natura naturans* conceived as *natura naturata*. We call the antecedent, Cause, and the sequent, Effect; but these are merely relative designations: the sequence itself is antecedent to some subsequent change, and the former antecedent was once only a sequent to its cause; and so on. Causation is change; when the change is completed, we name the result effect. It is only a matter of naming. But inciting this change, causing it, as we say, there is some power (cause) in nature; to know this effect therefore—that is, not merely to have a relative conception of our own condition consequent on it, but to comprehend this power, this reality, to penetrate its mystery, to see it in its totality, we must know *what* the effect is, and *how* it is; we must know its point of departure, and its point of destination; in a word, we must transcend the knowledge of phenomena, and acquire that of *noumena*. In a popular sense we are said to know effects, but to be ignorant of causes. Truly, we are ignorant of both—and equally ignorant. A knowledge of sequences we have, and of nothing more. The vital power determining these sequences we name, but cannot know; we may call it attraction, heat, electricity, polarization, etc., but, having named, we have not explained it.

This is what Spinoza implicitly teaches; and had Mr. Hallam attended only to what the very next axiom proclaims, namely, that things have nothing in common with each other, cannot be understood by means of each other, *i. e.* the conception of one not involving the conception of the other—he would have understood Spinoza's meaning; for, if effect be *different* from cause,

then its conception does not involve the conception of cause; but if it be the *same* as cause, then does the one conception involve that of the other; *ergo*, the more complete the knowledge of the one, the more complete the knowledge of the other. The reader will bear this in mind when studying Spinoza.

We will now proceed to the

PROPOSITIONS.

PROP. I. Substance is prior in nature to its accidents.

Demonstration. Per Definitions 3 and 5.

PROP. II. Two Substances, having different Attributes, have nothing in common with each other.

Demonst. This follows from Def. 3; for each Substance must be conceived in itself and through itself; in other words, the conception of one does not involve the conception of the other.

PROP. III. Of things which have nothing in common, one cannot be the cause of the other.*

Demonst. If they have nothing in common, then (per Axiom 5) they cannot be conceived by means of each other; *ergo* (per Axiom 4) one cannot be the cause of the other.
Q. E. D.

PROP. IV. Two or more distinct things are distinguished among themselves either through the diversity of their Attributes, or through the diversity of their Modes.

Demonst. Every thing which is, is in itself or in some other thing (per Axiom 1); that is (per Def. 3 and 5), there is

* This fallacy has been one of the most influential corrupters of philosophical speculation. For many years it was undisputed; and most metaphysicians still adhere to it. See Mill's *System of Logic*, ii. 376-386. The assertion is that only *like* can act upon *like*. This was the assumption of Anaxagoras, and the groundwork of his system. If the assumption be correct, his system is true. But although it is true that *like* produces (causes) *like*, it is also as true that *like* produces *unlike*: thus fire produces *pain* when applied to our bodies, *explosion* when applied to gunpowder, *charcoal* when applied to wood; all these effects are unlike the cause. Spinoza's position is logical; those who have since upheld the fallacy have not that excuse.

nothing out of ourselves (*extra intellectum*) but Substance and its Modes. There is nothing out of ourselves whereby things can be distinguished amongst one another, except Substances, or (which is the same thing, per Def. 4*) their Attributes and Modes.

PROP. V. It is impossible that there should be two or more Substances of the same nature, or of the same Attribute.

Demonst. If there are many different Substances, they must be distinguished by the diversity of their Attributes, or of their Modes (per Prop. 4). If only by the diversity of their Attributes, it is thereby conceded that there is nevertheless only one Substance of the same Attributes; but if by the diversity of their Modes, it follows that Substance being prior in nature to its Modes, it must be considered independently of them; that is (per Def. 3 and 6), cannot be conceived as distinguished from another; that is (per Prop. 4), there cannot be many Substances, but only one Substance. Q. E. D.

PROP. VI. One Substance cannot be created by another Substance.

Demonst. There cannot be two Substances with the same Attributes (per Prop. 5); *i. e.* (per Prop. 2), having any thing in common with each other; and therefore (per Prop. 3) one cannot be the cause of the other.

Corollary. Hence it follows that Substance cannot be created by any thing else. For there is nothing in existence except Substance and its Modes (per Axiom 1, and Def. 3 and 5); now this Substance, not being created by another, is self-caused.

Corollary 2. This proposition is more easily to be demonstrated by the absurdity of its contradiction;—for if Substance can

* In the original, by a slip of the pen, Axiom 4 is referred to instead of Def. 4; and Auerbach has followed the error in his translation. We notice it because the reference to Axiom 4 is meaningless, and apt to puzzle the student.

be created by any thing else, the conception of it would depend on the conception of the cause (per Axiom 4 *), and hence (per Def. 3) it would not be Substance.

PROP. VII. It pertains to the nature of Substance to exist.

Demonst. Substance cannot be created by any thing else (per Coroll. Prop. 6), and is therefore the cause of itself; *i. e.* (per Def. 1) its essence necessarily involves existence; or it pertains to the nature of Substance to exist. Q. E. D.

PROP. VIII. All Substance is necessarily infinite.

Demonst. There exists but one Substance of the same Attribute; and it must either exist as infinite or as finite. But not as finite, for (per Def. 2) as finite it must be limited by another Substance of the same nature, and in that case there would be two Substances of the same Attribute, which (per Prop. 5) is absurd. Substance therefore is infinite. Q. E. D.

Scholium.—I do not doubt that to all who judge confusedly of things, and are not wont to inquire into first causes, it will be difficult to understand the demonstration of Prop. 7, because they do not sufficiently distinguish between the modifications of Substance, and Substance itself, and are ignorant of the manner in which things are produced. Hence it follows, that seeing natural things have a commencement, they attribute a commencement to Substances; for he who knows not the true causes of things, confounds all things, and sees no reason why trees should not talk like men; or why men should not be formed from stones as well as from seeds; or why all forms cannot be changed into all other forms. So, also, those who confound the divine nature with the human, naturally attribute human affections to God, especially as they are ignorant how these affections are produced in the mind. But if men attended to the nature of Substance, they would not in the least doubt the truth of Prop. 7; nay, this proposition would be an axiom to all, and would be numbered among common notions. For by Substance they

* Here the potency and significance of Axiom 4 begins to unfold itself.

would understand that which exists in itself, and is conceived through itself; *i. e.* the knowledge of which does not require the knowledge of any thing antecedent to it.* But by modification they would understand that which is in another thing, the conception of which is formed through the conception of the thing in which it is, or to which it belongs: we can therefore have correct ideas of non-existent modifications, because, although out of the understanding they have no reality, yet their essence is so comprehended in that of another, that they can be conceived through this other. The truth of Substance (out of the understanding) lies nowhere but in itself, because it is conceived *per se*. If therefore any one says that he has a distinct and clear idea of Substance, and yet doubts whether such a Substance exist, this is as much as to say that he has a true idea, and nevertheless doubts whether it be not false (as a little attention sufficiently manifests); or, if any man affirms Substance to be created, he at the same time affirms that a true idea has become false; than which nothing can be more absurd. Hence it is necessarily confessed that the existence of Substance, as well as its essence, is an eternal truth. And hence we must conclude that there is only one Substance possessing the same Attribute; a position which requires here a fuller development. I note therefore—

1. That the correct definition of a thing includes and expresses nothing but the nature of the thing defined. From which it follows—

2. That no definition includes or expresses a distinct number of individuals, because it expresses nothing but the nature of the thing defined; *e. g.* the definition of a triangle expresses no more than the nature of a triangle, and not any fixed number of triangles.

* The reader will bear in mind the result of Descartes' philosophy, if he would fully seize Spinoza's meaning and the basis on which it reposes. Descartes, as we saw, could find nothing indubitable but existence. Existence was the primal fact of all philosophy, self-evident and indisputable.

3. There must necessarily be a distinct cause for the existence of every existing thing.

4. This cause, by reason of which any thing exists, must be either contained in the nature and definition of the existing thing (viz. that it pertains to its nature to exist), or else must lie beyond it—must be something different from it.

From these positions it follows, that if a certain number of individuals exist, there must necessarily be a cause why that number, and not a larger or smaller number: *e. g.* if in the world twenty men exist (whom, for greater perspicuity, I suppose to exist at once, no more having previously existed), it will not be sufficient to show the reason why twenty men exist, to point to human nature as the cause, but it will further be necessary to show cause why only twenty men exist, because (per note 3) a cause must be given for the existence of every thing. This cause however (per notes 2 and 3) cannot be contained in human nature itself, because the true definition of man does not involve the number twenty. Hence (per note 4) the cause why twenty men exist, and why each individual exists, must lie beyond each of them; and therefore must we absolutely conclude that every thing, the nature of which admits of many individuals, must necessarily have an external cause. As therefore it pertains to the nature of Substance to exist, so must its definition include a necessary existence, and consequently from its sole definition we must conclude its existence. But, as from its definition, as already shown in notes 2 and 3, it is not possible to conclude the existence of many Substances, *ergo* it necessarily follows that only *one* Substance of the same nature can exist."

Here we may pause in our translation, before we penetrate too far in this geometrical exposition of Spinoza's theology. Enough has already been given to exhibit the rigor and precision with which the consequences are deduced step by step, each proposition being evolved from those which preceded it; and he who wishes to follow the system in detail must open the *Ethics* for himself, abridgment being impossible. To complete our expo-

sition of the doctrine, we shall merely state in a few sentences the principal positions :

There is but one infinite Substance, and that is God. Whatever is, is in God ; and without Him, nothing can be conceived. He is the universal Being of which all things are the manifestations. He is the sole Substance ; every thing else is a Mode ; yet, without Substance, Mode cannot exist. God, viewed under the attributes of Infinite Substance, is the *natura naturans*,—viewed as a manifestation, as the Modes under which his attributes appear, he is the *natura naturata*. He is the cause of all things, and that immanently, but not transiently. He has two infinite attributes—Extension and Thought. Extension is visible Thought, and Thought is invisible Extension : they are the Objective and Subjective of which God is the Identity. Every *thing* is a mode of God's attribute of Extension ; every *thought*, wish, or feeling, a mode of his attribute of Thought. That Extension and Thought are not Substances, as Descartes maintained, is obvious from this : that they are not conceived *per se*, but *per aliud*. *Something* is extended : what is ? Not the Extension itself, but something prior to it, viz. Substance. Substance is uncreated, but creates by the internal necessity of its nature. There may be many existing things, but only one existence ; many forms, but only one Substance. God is the "*idea immanens*"—the One and All.

Such is a brief outline of the fundamental doctrine of Spinoza ; and now we ask the reader, can he reconcile the fact of this being a most religious philosophy, with the other fact of its having been almost universally branded with Atheism ? Is this intelligible ? Yes ; three causes present themselves at once. 1. The readiness with which that term of obloquy has been applied to opponents, from time immemorial—to Socrates as to Gottlieb Fichte. 2. The obscurity of polemical vision, and the rashness of party judgment. 3. The use of the ambiguous word Substance, whereby God was confounded with the material world.

This last point is the most important, and deserves attention. To say "God is the infinite substance," does look, at first sight,

like the atheism of the D'Holbach School; but no one could ever have read twenty pages of Spinoza without perceiving this to be a misunderstanding; for he expressly teaches that God is *not* corporeal, but that body is a Mode of Extension.* No: God is not the material universe, but the universe is one aspect of his infinite Attribute of Extension: he is the *identity* of the *natura naturans* and the *natura naturata*.†

It is a mere verbal resemblance, therefore, this, of Spinozism to Atheism; but the history of philosophy shows too many instances of verbal analogies and ambiguities becoming sources of grave error, to astonish any reader.

Next to the inevitable misapprehensions created by Spinoza's use of the word Substance, we must rank among the sources of his ill repute the misapprehensions created by his doctrine of Final Causes. Although Bacon energetically reprobated the pursuit of Final Causes—those “barren virgins,” as he characteristically styled them—pointing out the productive error of all such pursuit; and although the advance and extension of science has gradually more and more displaced this pursuit, it is still followed by minds of splendid reach and attainment, as the surest principle of research in some departments. But although the error has the countenance of men whom we cannot speak of

* Dugald Stewart somewhat naïvely remarks that “in no part of Spinoza's works has he avowed himself an Atheist” (he would have been very much astonished at the charge); “but it will not be disputed by those who comprehend the drift of his reasonings, that, in point of practical tendency, Atheism and Spinozism are one and the same.” It may be so; yet nothing can warrant the accusation of Atheism, merely because Spinoza's doctrines may have the same practical tendency as that of Atheism. Spinoza did not deny the existence of God; he denied the existence of the world: he was consequently an *Acosmist*, not an Atheist. If the practical tendency of these two opposite systems really is the same, Spinoza could not help it.

† “*Natura naturans et natura naturata in identitate Deus est.*” It must be borne in mind that *identity* does not (as in common usage) mean *sameness*, but the root from which spring two opposite stems, and in which they have a common life. Man, for instance, is the identity of soul and body; water is the identity of oxygen and hydrogen. Great mistakes are constantly being made, owing to overlooking this distinction of vulgar and philosophical terms.

without respect, the fact itself that only in those departments of inquiry, wherein imperfect knowledge still permits the Metaphysical Method to exercise its perverting influence, are Final Causes ever appealed to, is significant, we think, of the *nature* of the error. While no Astronomer, no Physicist, no Chemist reasons teleologically, there are many Biologists who proclaim teleology to be a luminous guide. Cuvier declared that to it he owed his discoveries; Owen declares that it has often aided him. We cannot here pause to discuss the validity of final causes, but the reader will probably be glad to have Spinoza's remarkable analysis, which he throws into an Appendix at the end of the book *De Deo*:

"Men do all things for the sake of an end, namely the good, or useful, which they desire. Hence it comes that they always seek to know only the final causes of things which have taken place, and when they have heard these they are satisfied, not having within themselves any cause for further doubt. But if they are unable to learn these final causes from some one else, nothing remains to them but to turn in upon themselves, and to reflect on the ends by which they are themselves wont to be determined to similar actions; and thus they necessarily judge of the mind of another by their own. Further, as within themselves and out of themselves they discover many means which are highly conducive to the pursuit of their own advantage,—for example, eyes to see with, teeth to masticate with, vegetables and animals for food, the sun to give them light, the sea to nourish fish, etc.,—so they come to consider all natural things as means for their benefit: and because they are aware that these things have been found, and not prepared by them, they have been led to believe that some one else has adapted these means to their use. For after considering things in the light of *means*, they could not believe these things to have made themselves, but arguing from their own practice of preparing means for their use, they must conclude that there is some ruler or rulers of nature endowed with human freedom, who have provided all

these things for them, and have made them all for the use of men. Moreover, since they have never heard any thing of the mind of those rulers, they must necessarily judge of this mind also by their own; and hence they have argued that the Gods direct all things for the advantage of man, in order that they may subdue him to themselves, and be held in the highest honor by him. Hence each has devised, according to his character, a different mode of worshipping God, in order that God might love him more than others, and might direct all nature to the advantage of his blind cupidity and insatiable avarice. Thus this prejudice has converted itself into superstition, and has struck deep root into men's minds; and this has been the cause why men in general have eagerly striven to explain the final causes of all things. But while they have sought to show that Nature does nothing in vain (*i. e.* which is not fit for the use of men), they seem to me to have shown nothing else than that Nature and the Gods are as foolish as men. And observe, I pray you, to what a point this opinion has brought them. Together with the many useful things in Nature, they necessarily found not a few injurious things, namely, tempests, earthquakes, diseases, etc.; these they supposed happened because the Gods were angry on account of offences committed against them by men, or because of faults incurred in their worship; and although experience every day protests, and shows by infinite examples that benefits and injuries happen indifferently to pious and ungodly persons, they do not therefore renounce their inveterate prejudice. For it was easier to them to class these phenomena among other things, the cause of which was unknown to them, and thus retain their present and innate condition of ignorance, than to destroy all the fabric of their belief, and excogitate a new one."

We cannot pursue the argument further, because in the subsequent positions Spinoza refers to propositions proved in the *Ethics*; what has been given will however suffice to show how clearly and emphatically he described the anthropomorphic tendency of judging Infinite by Finite wisdom. With it we conclude

the exposition of Spinoza's theology—one of the most extraordinary efforts of speculative faculty which history has revealed to us. We have witnessed the mathematical rigor with which it is developed; we have followed him step by step, dragged onwards by his irresistible logic; and yet the final impression left on our minds is, that the system has a *logical* but not a *vital* truth. We shrink back from the consequences whither it so irresistibly leads us; we gaze over the abyss to the edge of which we have been dragged, and seeing naught but chaos and despair, we refuse to build our temple there. We retrace our steps with hurried earnestness, to see if no false route has been taken; we examine every one of his positions, to see if there be not some secret error, parent of all other errors. Arrived at the starting-point, we are forced to confess that we see no error—that each conclusion is but the development of antecedent positions; and yet, in spite of this, the mind refuses to accept the conclusions.

This, then, is the state of the inquirer: he sees a vast chain of reasoning carried on with the strictest rigor. He has not been dazzled by rhetoric nor confused by illustrations. There has been no artful appeal to his prejudices or passions; he has been treated as a reasoning being, and has no more been able to doubt the positions, after once assenting to the definitions and axioms, than he is able to doubt the positions of Euclid. And yet we again say that the conclusions are repugned, refused; they are not the truth the inquirer has been seeking; they are no expressions of the thousand-fold life, the enigma of which he has been endeavoring to solve.

Unable to see where this discrepancy lies, he turns with impatience to the works of others, and seeks in criticisms and refutations an outlet from his difficulty. But—and it is a curious point in the history of philosophy—he finds that this bold and extraordinary thinker has never been refuted by any one meeting him on his own ground. Men have taken up separate propositions, and having wrenched them from their connection with the whole system, have easily shown them to be quite at variance

with—the systems of the refuters. This is easy work.* On the other hand, the inquirer finds that the great metaphysicians of Germany adopt Spinoza's fundamental positions, differing with him only on points of detail or of language. In their works the consequences do not look so appalling, because they are set forth in lofty terms and ambiguous eloquence; but the difference is only verbal. Is there, then, no alternative? Must I accept Spinoza's system, repugnant as it is? Such is the inquirer's perplexity.

To release him from this perplexity will perhaps be possible, although only possible, we believe, by arguments which cut away the root of all metaphysical knowledge whatever. If Spinoza is in error, the error must be *initial*, for we have just admitted that it does not lie in any illogical deduction. And initial the error is. The method brings it into distinctness. The application of Geometry to Metaphysics is the process most repulsive to metaphysicians, because it best serves to elucidate the nullity of their attempts. Geometry is purely deductive; from a few definitions and axioms the whole series of consequences is evolved. Metaphysics also is purely deductive; from a few definitions and axioms it constructs a universe. M. Damiron, in his very able *Mémoire*, denies that the geometrical method can be applied to Metaphysics, because our intelligence cannot form notions so clear and necessary respecting substance, cause, time, good and evil, as respecting points, lines, and surfaces; and whenever such clear notions have been attempted it has only been by sacrificing something of the reality, by the consideration of one aspect to the exclusion of the other.† This is perfectly true if applied to meta-

* This is the way Bayle answers Spinoza; yet his answer has been pronounced by Dugald Stewart "one of the most elaborate and acute refutations which has yet appeared." Mr. Stewart's dislike of the consequences he believed inseparable from Spinozism has here, we think, biased his judgment. Bayle's attempt at a refutation is now pretty generally considered to be pitiable. Jacobi declares Spinozism to be unanswerable by those who simply reason on the problem: faith alone can solve it otherwise.

† *Mémoire sur Spinoza*, 19, 20.

physicians in general; but is certainly not true as applied to Spinoza, whose notions of substance, cause, etc. are not less clear than his notions of lines and surfaces,—a point we shall insist on presently. Meanwhile let us ask, *why* can we not form notions of cause, substance, and the rest, equalling in clearness our notions of lines and surfaces? The answer to this question dooms metaphysics to eternal uncertainty: It is because Geometry *never quits the sphere of its first assumption*, that its axioms retain their necessary clearness, and its consequences their necessary truth. It begins with lines and surfaces, with lines and surfaces it ends; it is a purely subjective and deductive science. Its truths, when objectively applied, include *no other elements* than those *originally* given; when from *ideal* lines and the relations of those lines we pass to *real* lines and relations, we are still strictly within the sphere of lines and their relations; and the mightiest geometry can tell us nothing whatever of any *other* property of substance; it is powerless before any relations except those of surfaces. If Metaphysics could thus remain within the sphere of its original assumption, it also might rival geometry in precision; but Metaphysics unhappily starts from the subjective sphere, and immediately passes on to the objective, pretending to *include* in its circle far more than is given in the original subjective datum, pretending indeed to disclose the *whole nature* of substance, cause, time, and space, and not merely *certain relations among our ideas* of these. When, for example, Spinoza passes from his ideal distinction of cause and effect to real applications, as when he proves that God must act according to the laws of His own nature, yet without constraint, nothing determining Him save His own perfection, it is evident that by this Spinoza believes the purely subjective definition he has framed expresses the whole truth of objective reality; he pretends to *know* the nature of God, and to know it through the notions he has framed of cause and effect. The error here is as great, though not so potent, as if a mathematician were to deduce the chemical properties of a salt from the properties of right angles. To select

another example, the fifth proposition, on which so much of Spinoza's system depends: "It is impossible that there should be two or more Substances of the same nature, or of the same Attribute." This is subjectively true; as true as a proposition in Euclid; that is to say, it is perfectly coherent with all that Spinoza teaches of Substance and Attribute; but if we pass from his subjective circle out into the great world of reality—if we disregard his *definition*, and look only at actual substances before us—say two minerals—we then fail to detect any proof of his subjective definition necessarily or even probably according with objective fact, since we perceive the definition to be framed from his ideas, and not founded on objective reality.

The mathematician deduces conclusions from purely subjective distinctions, and these conclusions are found to correspond with objective fact, to nearly the whole extent of what was originally assumed; namely the relations of surfaces, and no further. The metaphysician deduces conclusions equally subjective, and it may be that such conclusions will apply to objective fact (as when it is said "nothing can be and not be at the same moment"); but the moment he transcends the circle of subjective distinction, as when he speaks of Cause, Time, Space, and Substance, his ideas are necessarily indistinct, because he cannot know these *things*: he can only frame logical conclusions respecting them, and these logical conclusions at every step need *verification*.

This, of course, the metaphysician will deny. He believes in the validity of reason. He maintains the perfect competence of human intellect to know and discourse on Cause, Time, Space, and Substance; but he has not the same clear argument Spinoza had, on which to ground this belief. And here we are face to face with the radical assumption which constitutes the initial error and logical perfection of Spinoza's system. He holds and expressly teaches that the *subjective idea* is the actual image or complete expression of the *objective fact*. "Hoc est, id quod in intellectu objectivè continetur debet necessario in naturâ dari." The order and connection of ideas is precisely the order and

connection of things. In the Scholium to Prop. VIII. we have seen him maintaining that the correct definition of a thing expresses the nature of a thing, and nothing but its nature: which is true in one sense; for unless it express the nature of the thing, the definition must be incorrect: but false in another and more important sense; for every definition we can frame only expresses *our* conceptions of the nature of the thing: and thus we may define the nature of the inhabitants of the moon, and adhere to our definitions with the utmost logical rigor, yet all the while be utterly removed from any real knowledge of those inhabitants. The position is logically deducible from Spinoza's conception of the relation between Thought and Extension as the two Attributes of Substance; but it is a position which is emphatically contradicted by all sound psychology. Nevertheless, without it Metaphysics has no basis. Unless clear ideas are to be accepted as the truths of things, and unless every *idea*, which is distinctly conceived by the mind, has its *ideate*, or *object*,—metaphysicians are without plausible pretence.

Having thus signalized the fundamental position of Spinoza's doctrine, it is there, if anywhere, that we shall be able to show his fundamental error. On the truth or falsehood of this one assumption, must Spinozism stand or fall; and we have formerly endeavored to show that the assumption is false. Those who agree in the reasonings we adduced may escape Spinozism, but they escape it by denying the possibility of all Philosophy.

This consideration, that the mind is not a passive mirror reflecting the nature of things, but the partial creator of its own forms—that in perception there is nothing but certain changes in the percipient—this consideration, we say, is the destruction of the very basis of metaphysics, for it expressly teaches that the subjective idea is *not* the correlate of the objective fact: and only upon the belief that our ideas are the perfect and adequate images of external things can any metaphysical speculation rest. Misled by the nature of geometry, which draws its truths from the mind as the spider draws the web from its bosom, Descartes

assumed that metaphysical truths could be attained in the same way. This was a confusion of reasoning, yet Spinoza, Leibnitz, and their successors, followed him unhesitatingly. Spinoza, however, had read Bacon's denouncement of this *à priori* Method, though evidently unprepared to see the truth of the protest. It is curious to read his criticism of Bacon: he looks on it as that writer's great error to have mistaken the knowledge of the first cause and origin of things. "On the nature of mind," he says, "Bacon speaks very confusedly; and while he proves nothing, judges much. For in the first place he supposes that the human intellect, besides the deceptions of the senses, is subject to the deceptions of its own nature, and that it conceives every thing according to the analogies of its own nature, and not according to the analogies of the universe; so that it is like an unequal mirror to the rays of things, which mixes the conditions of its own nature with those of external things."*

We look upon Spinoza's aberration as remarkable, however, because he had also seen that in some sense the subjective was not the absolute expression of the objective; as is proved by his celebrated argument for the destruction of final causes, wherein he showed that *order* was a thing of the imagination, as were also right and wrong, useful and hurtful—these being merely such in relation to *us*. Still more striking is his anticipation of Kant in this passage: "Ex quibus clarè videre est, mensuram, tempus, et numerum, nihil esse præter cogitandi, seu potius imaginandi modos;" which should have led him to suspect that the same law of mental forms was also applicable to all other subjects.

We have pointed out the initial error, let us now refer to the logical perfection of Spinoza's system. M. Damiron argues against the application of the geometric method, on the ground

* "Nam primò supponit quod intellectus humanus, præter fallaciam sensuum, suâ solâ naturâ fallitur, omniaque fingit ex analogiâ suæ naturæ, et non ex analogiâ universi; adeò ut sit instar speculi inæqualis ad radias rerum, qui suam naturam naturæ rerum immiscet."—*Epist. ii., Opera*, p. 398.

of the imperfect conceptions men form of metaphysical objects; but this, as already hinted, cannot be said of Spinoza's conceptions; they are as perfect and as clear as his conceptions of geometry; whether they are as *accurate* and comprehensive as they are clear, is another question. Spinoza would maintain them to be so; and he would be justified on his principles; justified, indeed, on all logical principles of metaphysics. Did we not see that the perfection of Mathematics was owing to its never transcending the sphere of its first assumption, never including other elements than those included in its definitions and axioms? Precisely this may also be said of Spinozism: its original assumption is, that every clear idea expresses the actual nature of the object; and hence whatever conclusions are logically evolved from clear ideas, will be found objectively represented in the external world. Whether the mathematician works a problem in his mind with ideal surfaces, or actually juxtaposes substances and points out their relations of surface, the truths deduced are equally valid; in the same way, whenever a Spinozist works out a problem with ideal elements, he is doing no more—on his assumption—than if he had the objective elements before him, and could visibly disclose their relations. Hence the full justification of Spinoza's employment of the geometrical method. And his employment of it, while exciting the admiration of all posterity for the gigantic power of thought disclosed, has had the further advantage of bringing within the narrowest possible field, the whole question of the possibility of Metaphysical certitude.

We must not, however, longer linger with this great and good man, and his works. A brave and simple man, earnestly meditating on the deepest subjects that can occupy the human race, he produced a system which will ever remain as one of the most astounding efforts of abstract speculation—a system that has been decried, for nearly two centuries, as the most iniquitous and blasphemous of human invention; and which has now, within the last sixty years, become the acknowledged parent of a whole nation's philosophy, ranking among its admirers some of the

most pious and illustrious intellects of the age. The ribald atheist turns out, on nearer acquaintance, to be a "God-intoxicated man." The blasphemous Jew becomes a pious, virtuous, and creative thinker. The dissolute heretic becomes a childlike, simple, self-denying, and heroic philosopher. We look into his works with calm earnestness, and read there another curious page of human history: the majestic struggle with the mysteries of existence has failed, as it always must fail; but the struggle demands our warmest approbation, and the man our ardent sympathy. Spinoza stands out from the dim past like a tall beacon, whose shadow is thrown athwart the sea, and whose light will serve to warn the wanderers from the shoals and rocks on which hundreds of their brethren have perished.*

* Spinoza's works have been ably edited by Prof. Paulus, and better, recently by Bruder, in three volumes, 12mo. The edition we use is the quarto, which appeared shortly after his death: *B. D. S. Opera Posthuma*, 1677. A very close and literal German translation in five small volumes, by Berthold Auerbach, was published in 1841. M. Emile Saisset published one more paraphrastic in French. We are aware of scarcely any thing in English, critical or explanatory, except the account given in Mr. Hallam's *Introduction to the Literature of Europe*, and the articles *Spinoza* and *Spinozism* in the *Penny Cyclopædia*, and *Spinoza's Life and Works* in the *Westminster Review*, May, 1843 (the three last by the present writer).

Since the first edition of this History, there have appeared two remarkable articles by Mr. Froude,—one on Spinoza's Life, in the *Oxford and Cambridge Review*, Oct., 1847, and one on his doctrine, *Westminster Review*, July, 1854. An analysis of the *Tractatus* appeared in the *British Quarterly* a few years ago; and a translation of the *Tractatus Politicus* by William Maccall, 1855.

Besides historians of philosophy the following writers may be consulted: Sigwart, *Der Spinozismus historisch und philosophisch erläutert*; Herder, *Gott, einige Gespräche über Spinoza's System*; Damiron, *Mémoire sur Spinoza et sa Doctrine* (in the *Mémoires de l'Académie*).

CHAPTER III.

FIRST CRISIS IN MODERN PHILOSOPHY. 1

THE doctrine of Spinoza was of great importance, if only because it brought about the first crisis in modern Philosophy. His doctrine was so clearly stated, and so rigorously deduced from admitted premises, that he brought Philosophy into **this** dilemma :

Either my premises are correct, and we must admit that every clear and distinct idea is *absolutely* true ; true, not **only** subjectively, but objectively ;—If so, my system is true ;

Or my premises are false ; the voice of Consciousness is not the voice of truth ; and if so, then is my system false, but all Philosophy is impossible : since the only ground of Certitude—our Consciousness—is pronounced unstable, our only means of knowing the truth is pronounced fallacious.

Spinozism or Skepticism ? choose between them, for you have no other choice.

Mankind refused however to make a choice. If the principles which Descartes had established could have no other result than Spinozism, it was worth while inquiring whether those principles themselves might not be modified.

The ground of discussion was shifted : psychology took the place of ontology. It was Descartes' theory of knowledge which led to Spinozism ; that theory therefore must be examined : that theory henceforth becomes the great subject of discussion. Before deciding upon the merits of any system which embraced the great questions of Creation, the Deity, Immortality, etc., men saw that it was necessary to decide upon the competence of the human mind to solve such problems.

All knowledge must be obtained either through experience, or independent of experience. Knowledge dependent on experience must necessarily be merely knowledge of *phenomena*. All are agreed that experience can only be experience of ourselves as modified by objects. All are agreed that to know things *per se*—noumena—we must know them through some other channel than experience.

Have we, or have we not, that other channel? This is the problem. Before we can dogmatize upon ontological subjects, we must settle this question:

Can we transcend the sphere of our Consciousness and know things per se?

And this question further resolves itself into—*Have we ideas independent of experience?*

To answer this question was the great object of succeeding philosophers. The fact that modern philosophy, until Fichte, was almost exclusively occupied with Psychology has been constantly noticed; but the reason why Psychology assumed this importance, the reason why it took the place of all the higher subjects of speculation, has not, we believe, been distinctly stated. Men have contented themselves with the fact that Psychology occupied little of the attention of antiquity, still less of the attention of the Middle Ages; and only in modern times has it been the real ground on which the contests of the schools have been carried on. Psychology was the result of a tendency similar to that which in science produced the Inductive Method. In both cases a necessity had arisen for a new course of investigation; it had become evident that men had begun at the wrong end, and that before a proper answer could be given to any of the questions agitated, it was necessary first to settle the limits and conditions of inquiry, the limits and conditions of the inquiring faculties. Thus Consciousness became the basis of Philosophy; to make that basis broad and firm, to ascertain its nature and capacity, became the first object of speculation.

THIRD EPOCH.

PHILOSOPHY REDUCED TO A QUESTION OF PSYCHOLOGY

CHAPTER I.

HOBBS.

PERHAPS no writer except Spinoza has ever been so uniformly depreciated as Hobbes. From his first appearance until the present day he has been a by-word of contempt with the majority of writers; and even by those who have been liberal enough to acknowledge merit in an adversary, he has been treated as a dangerous and shallow thinker. The first person who saw his importance as a political thinker, and had the courage to proclaim it, was, we believe, James Mill. But as long as political and social theories continue to be judged of by their *supposed* consequences, so long will Hobbes be denied a fair hearing. He has roused the *odium theologicum*. It will be long ere that will be appeased.

Faults he had, unquestionably; short-comings, incomplete views; and—as all error is dangerous in proportion to its plausibility—we will say that he was guilty of dangerous errors. Let the faults be noted, but not overstrained; the short-comings and incomplete views, enlarged and corrected; the errors calmly examined and refuted. We shall be gainers by it; but by inconsiderate contempt, by vilifying, no good result can be obtained. Impartial minds will always rank Hobbes amongst the greatest writers England has produced. He is profound, and he

is clear; weighty, strong, and sparkling. His style, as mere style, is in its way as fine as any thing in English: it has the clearness as well as the solidity and brilliancy of crystal. Nor is the matter unworthy of the form. It is original, in the sense of having been passed through the alembic of his own brain, even when formerly the property of others. Although little of it would now appear novel, it was novel when he produced it. Haughty, dogmatic, overbearing in manner, he loved Truth, and never hesitated to proclaim her. "Harm I can do none," he says, in the opening of the *Leviathan*, "though I err no less than they (*i. e.* previous writers), for I shall leave men but as they are, in doubt and dispute; but intending not to take any principle upon *trust*, but only to put men in mind of what *they know already*, or may know by their experience, I hope to err less; and when I do, it must proceed from *too hasty concluding*, which I will endeavor as much as I can to avoid."*

In this passage we see Locke anticipated. It proclaims that Psychology is a science of observation; that if we would understand the conditions and operations of our minds, we must patiently look inwards and see what passes there. All the reasoning and subtle disputation in the world will not advance us one step, unless we first get a firm basis on fact. "Man," he says elsewhere, with his usual causticity, "has the exclusive privilege of forming general theorems. But this privilege is alloyed by another, that is, by the privilege of absurdity, to which no living creature is subject but man only. *And of men those are of all most subject to it, that profess Philosophy.*" And the cause of this large endowment of the privilege to Philosophers we may read in another passage, where he attributes the difficulty men have in receiving Truth, to their minds being prepossessed by false opinions—they having *prejudged* the question. The passage is as follows:—"When men have once acquiesced in untrue opinions, and registered them as authenticated records

* *Works*, edited by Sir W. Molesworth, iv. 1.

in their minds, it is no less impossible to speak intelligibly to such men than to write legibly on a paper already scribbled over."

Hobbes's position in the History of Philosophy is easily assigned. On the question of the origin of our knowledge he takes a decided stand upon Experience: he is the precursor of modern Materialism:

"Concerning the thoughts of man I will consider them first singly, and afterwards in a train or dependence upon one another. Singly they are every one a *representation* or *appearance* of some quality or other accident of a body without us, which is commonly called an *object*. Which object worketh on the eyes, ears, and other parts of a man's body; and by diversity of working, produceth diversity of appearances.

"The original of them all is that which we call *Sense*, for there is no conception in a man's mind which hath not at first, totally or by parts, been begotten upon the organs of sense. The rest are derived from that original."*

We have here stated, in the broadest manner, the principle of Materialism. It is in direct antagonism to the doctrine of Descartes that there are innate ideas; in direct antagonism to the old doctrine of the spirituality of Mind. Theoretically this principle may be insignificant; historically it is important.

Hobbes's language is plain enough, but we will still further quote from him, to obviate any doubt as to his meaning.

"According to the two principal parts of man, I divide his faculties into two sorts—faculties of the *body*, and faculties of the *mind*.

"Since the minute and distinct anatomy of the powers of the body is nothing necessary to the present purpose, I will only sum them up in these three heads,—power *nutritive*, power *generative*, and power *motive*.

* *Leviathan*, ch. 1. In the following exposition we shall sometimes cite from the *Leviathan*, and sometimes from the *Human Nature*. This general reference will enable us to dispense with iterated foot-notes.

"Of the powers of the mind there be two sorts—*cognitive, imaginative, or conceptive and motive.*

"For the understanding of what I mean by the power *cognitive*, we must remember and acknowledge that there be in our minds continually certain *images* or conceptions of the things without us. This *imagery* and *representation* of the qualities of the things without, is that which we call our *conception, imagination, ideas, notice*, or knowledge of them; and the *faculty*, or power by which we are capable of such knowledge, is that I here call *cognitive power*, or *conceptive*, the power of knowing or conceiving."

The mind is thus wholly constructed out of sense. Nor must we be deceived by the words *faculty* and *power*, as if they meant any activity of the mind—as if they implied that the mind *co-operated* with sense. The last sentence of the foregoing passage is sufficient to clear up this point. He elsewhere says:—"All the qualities called *sensible* are, in the object that causeth them, but so many several *motions* of the matter by which it presseth on our organs diversely. *Neither in us that are pressed are they any thing else but divers motions; for motion produceth nothing but motion.*"

Hobbes, therefore, and not Locke, is the precursor of that school of Psychology which flourished in the eighteenth century (principally in France), and which made every operation of the mind proceed out of *transformed sensations*; which ended, logically enough, in saying that to *think* is to *feel*—*penser c'est sentir.*

It is to Hobbes that the merit is due of a discovery which, though so familiar to us now as to appear self-evident, was yet in truth a most important discovery, and was adopted by Descartes in his *Meditations**—it is that our sensations do not correspond with any external qualities; that what are called sen-

* Descartes may possibly have discovered it for himself; but the priority of publication is at any rate due to Hobbes—a fact first noticed, we believe, by Mr. Hallam: *Literature of Europe*, iii. 271.

sible qualities are nothing but modifications of the sentient being :

“ Because the image in vision, consisting of color and shape, is the knowledge we have of the qualities of the object of that sense ; it is no hard matter for a man to fall into this opinion that the same color and shape are the very qualities themselves ; and for the same cause that sound and noise are the qualities of the bell or of the air. And this opinion hath been so long received that the contrary must needs appear a great paradox ; and yet the introduction of *species visible* and *intelligible* (which is necessary for the maintenance of that opinion) passing to and fro from the object is worse than any paradox, as being a plain impossibility. I shall therefore endeavor to make plain these points :

“ That the subject wherein color and image are inherent, is not the object or thing seen.

“ That there is nothing without us (really) which we call an image or color.

“ That the said image or color is but an apparition unto us of *the motion, agitation, or alteration which the object worketh in the brain*, or spirits, or some internal substance of the head.

“ That as in vision, so also in conceptions that arise from the other senses, the subject of their inference is not the object, but the sentient.”

This important principle, which Carneades among the ancients alone seems to have suspected, Hobbes has very clearly and conclusively illustrated.

Sense furnishes us with conceptions ; but as there are other operations of the mind besides the conceptive ; it remains to be seen how sense can also be the original of them.

And first, of *Imagination*. Mr. Hallam has noticed the acuteness and originality which often characterize Hobbes's remarks ; and he instances the opening of the chapter on Imagination in the *Leviathan*. It is worth quoting :—“ That when a thing lies still, unless somewhat else stir it, it will lie still forever, is a truth

no one doubts of. But that when a thing is in motion it will eternally be in motion, unless somewhat else stay it, though the reason be the same, namely that nothing can change itself, is not so easily assented to. For men measure not only other men but all other things by themselves; and, because they find themselves subject after motion to pain and lassitude, think every thing else grows weary of motion, and seeks repose of its own accord; little considering whether it be not some other motion wherein that desire of rest, they find in themselves, consisteth." Imagination Hobbes defines as a "conception remaining and by little and little decaying from and after the act of sense." . . . "Imagination, therefore, is but *decaying sense*." The reader must not here understand by imagination any thing more than the retaining of an *image* of the object, after the object is removed. It is the term used by Hobbes to express what James Mill happily called *Ideation*. Sense, Sensation; ideas, Ideation. Hobbes says, sense, Sensation; images, Imagination.

The materialism of Hobbes's theory does not consist merely in his language (as is the case with some philosophers—Locke, for instance); it lies at the very root of the theory. Thus, he says, we have sensations and we have images—ideas. Whence those images? "When a body is once in motion it moveth, unless something hinder it, eternally; and whatsoever hindereth it, cannot in an instant, but in time and by degrees, quite extinguish it; and as we see in the water, though the wind cease, the waves give not over rolling for a long time after: so also it happeneth in that *motion* which is made in the internal parts of man; then, when he sees, dreams, etc. For after the object is removed, or the eye shut, we still retain an image of the thing seen, though more obscure than when we see it. . . . The decay of sense in men waking is not the decay of the motion made in sense, but an obscuring of it, in such manner as the light of the sun obscureth the light of the stars; which stars do no less exercise their virtue, by which they are visible, in the day than in the night. But because amongst many strokes which our eyes, ears,

and other organs receive from external bodies, the predominant only is sensible; therefore the light of the sun being predominant, we are not affected with the action of the stars." This illustration is very happy; but it only serves to bring out into stronger relief the materialism of the theory. He has told us what Imagination is; let us now learn what is Memory. "This decaying sense, when we would express the thing itself, I mean *fancy* itself, we call *imagination*, as I have said before; but when we would express the decay, and signify that the sense is fading, old, and past, it is called *memory*. So that imagination and memory are but one thing, which for divers considerations hath divers names." Mr. Hallam objects to this, and says that it is very evident that imagination and memory are distinguished by something more than their names. Truly, by us; but not by Hobbes; he evidently uses the word imagination in a more general sense than we use it: he means by it Ideation. Thus he calls dreams "the imagination of them that sleep." It is that state of the mind which remains when the objects which agitated it by sensations are removed: the mind is then not so agitated, but neither is it calm; and he compares that state to the gentle rolling of the waves after the wind hath ceased.

Let this be distinctly borne in mind: Hobbes sees nothing in the intellect but what was previously in the sense. Sensations, and the traces which they leave (*i. e.* images), form the simple elements of all knowledge; the various commixtures of these elements form the various intellectual faculties. We may now open at the third chapter of the *Leviathan*. In it he propounded, as something quite simple and obvious, the very important law of association of ideas.* He states it with great clearness and thorough mastery, though he evidently was quite unaware of its extensive application.

"When a man thinketh," he says, "on any thing whatsoever, his next thought after is not altogether so casual as it seems to

* See Sir W. Hamilton's Dissertation affixed to *Reid's Works*, p. 898, for a history of this law of association.

be. Not every thought to every thought succeeds indifferently. But as we have no imagination whereof we have not formerly had sense in whole or in parts, so we have no transition from one imagination to another whereof we never had the like before in our senses. The reason whereof is this: all fancies (*i. e.* images) are *motions within us, relicts of those made in sense*; and those motions that immediately succeed one another in the sense continue also together after the sense; insomuch as the former coming again to take place and be predominant, the latter followeth by coherence of the matter moved, in such manner as water upon a plain table is drawn which way any one part of it is guided by the finger."

The materialism here is distinct enough. He continues, in excellent style: "This train of thoughts, or mental discourse, is of two sorts. The first is unguided, without design, and inconstant, wherein there is no passionate thought to govern and direct those that follow to itself, as the end and scope of some desire or other passion; in which case the thoughts are said to wander, and seem impertinent one to another, as in a dream. Such are commonly the thoughts of men that are not only without company, but also without care of any thing; though even then their thoughts are as busy as at other times, but without harmony; as the sound which a lute out of tune would yield to any man; or in tune, to one that could not play. And yet in this wild ranging of the mind, a man may oftentimes perceive the way of it, and the dependence of one thought upon another. For in a discourse of our present civil war, what would seem more impertinent than to ask, as one did, what was the value of a Roman penny? Yet the coherence to me was manifest enough. For the thought of the war introduced the thought of delivering up the King to his enemies; the thought of that brought in the thought of the delivering up of Christ; and that again the thought of the thirty pence, which was the price of that treason; and thence easily followed that malicious question, and all this in a moment of time; for thought is quick."

"For thought is quick." This is the simple pregnant comment, justly deemed sufficient. It is no purpose of this history to dwell upon literary merits; "but the style," as Buffon says, "is the man,"* and occasionally we are forced to notice it. The plain direct remark with which Hobbes concludes the above passage, would, in the hands of many moderns, have run somewhat thus: "How wonderful is thought! how mighty! how mysterious! In its lightning speed it traverses ail space, and makes the past present." Hobbes, with a few simple, direct words, produces a greater impression than would all the swelling pomp of a passage bristling with notes of exclamation. This is the secret of his style. It is also the characteristic of his speculations. Whatever faults they may have, they have no vagueness, no pretended profundity. As much of the truth as he has clearly seen he clearly exhibits: what he has not seen he does not pretend to see.

One important deduction from his principles he has drawn: "Whatsoever we imagine is *finite*. Therefore there is no idea, no conception of any thing we call *infinite*. No man can have in his mind an image of infinite magnitude, nor conceive infinite swiftness, infinite time, or infinite power. When we say that any thing is infinite, we signify only that we are not able to conceive the ends and bounds of the thing named, having no conception of the thing, but of our own inability. And therefore the name of God is used not to make us conceive him, for he is incomprehensible, and his greatness and power are inconceivable, but that we may honor him. Also, because whatsoever we con-

* I leave this passage as it originally stood, for the sake of correcting a universal error. I have since detected it to be an error by the simple process of reading Buffon's actual words, which some French writer misquoted from memory, and which thousands have repeated without misgiving, although the phrase is an absurdity. The phrase occurs in Buffon's *Discours de Réception à l'Académie*, where speaking of style as that alone capable of conferring immortality on works, because the matter was prepared by preceding ages, and must soon become common property, whereas style remains a part of the man himself; he adds, "*Ces choses sont hors de l'homme; le style est de l'homme même.*" There is immense difference between saying *le style c'est l'homme*, and *le style est de l'homme*.

ceive has been perceived first by sense, either all at once or by parts, *a man can have no thought representing any thing not subject to Sense.*"

This is frank, but is it true? On Hobbes's principles it is irresistible. His error lies in assuming that all our *thoughts* must be *images*. So far is this from being true, that not even all our *sensations* are capable of forming images. What images are given by the sensations of heat or cold, of music or of taste?

Every man's consciousness will assure him that thoughts are not always images. It will also assure him that he has the idea, notion, conception, figment (or whatever name he may give the thought) of Infinity. If he attempts to form an image of it, that image will of course be finite: it would not otherwise be an image. But he can think of it; he can reason of it. It is a *thought*. It is in his mind; though how it got there may be a question. The incompleteness of Hobbes's psychology lies in the inability to answer this question. If the maxim he adopts be true, *nihil est in intellectu quod non prius fuerit in sensu*, the question is insoluble; or rather the question itself is a practical refutation of the maxim.

We insist upon Hobbes's materialism, the better to prepare the reader for a correct appreciation of Locke, one of the most misrepresented of plain writers. Hobbes, in the sixth chapter of his *Human Nature*, has very carefully defined what he means by knowledge. "There is a story somewhere," he says, "of one that pretends to have been miraculously cured of blindness, wherewith he was born, by St. Alban or other saints, at the town of St. Albans; and that the Duke of Gloucester being there, to be satisfied of the truth of the miracle, asked the man, What color is this? who, by answering it was green, discovered himself, and was punished for a counterfeit: for though by his sight newly received he might distinguish between green and red and all other colors, as well as any that should interrogate him, yet he could not possibly know, at first sight, which of them was called green, or red, or by any other name.

"By this we may understand there be *two kinds* of knowledge, whereof the one is nothing else but *sense*, or knowledge *original*, and *remembrance* of the same; the other is called *science*, or knowledge of the *truth of propositions*, and how things are called, and is derived from *understanding*. Both of these sorts are but *experience*; the former being the experience of the effects of things that work upon us from *without*; and the latter experience men have from the proper use of *names* in language: and all experience being, as I have said, but remembrance, all knowledge is remembrance."

The only ambiguity possible in the above passage is that which might arise from the use of the word *understanding*. This he elsewhere defines as follows:

"When a man, upon the hearing of any speech, hath those thoughts which the words of that speech in their connection were ordained and constituted to signify, then he is said to understand it; *understanding* being nothing else but conception formed by speech."

We must content ourselves with merely alluding to his admirable observations on language, and with quoting, for the hundredth time, his weighty aphorism, "Words are wise men's counters; they do but reckon by them; but they are the money of fools."

No attempt is here made to do full justice to Hobbes; no notice can be taken of the speculations which made him famous. Our object has been fulfilled if we have made clear to the reader the position Hobbes occupies in modern psychological speculation.

CHAPTER II.

LOCKE.

§ I. LIFE OF LOCKE.

JOHN LOCKE, one of the wisest of Englishmen, was born at Wrington, in Somersetshire, on the 29th of August, 1632. Little is known of his family, except that his father had served in the Parliamentary wars; a fact not without significance in connection with the steady love of liberty manifested by the son.

His education began at Westminster, where he stayed till he was nineteen or twenty. He was then sent to Oxford. That University was distinguished then, as it has ever been, by its attachment to whatever is old: the Past is its model; the Past has its affection. That there is much good in this veneration for the Past, a few will gainsay. Nevertheless, a University which piqued itself on being behind the age, was scarcely the fit place for an original thinker. Locke was ill at ease there. The philosophy upheld there was Scholasticism. On such food a mind like his could not nourish itself. Like his great predecessor Bacon, he imbibed a profound contempt for the University studies, and in after-life regretted that so much of his time should have been wasted on such profitless pursuits. So deeply convinced was he of the vicious method of college education, that he ran into the other extreme, and thought self-education the best. There is a mixture of truth and error in this notion. It is true that all great men have been mainly self-taught; all that is most valuable a man must learn for himself, must work out for himself. The error of Locke's position is the assumption that all men *will* educate themselves if left to themselves. The fact is, the majority have to be educated by force. For those

who, if left to themselves, would never educate themselves, colleges and schools are indispensable.

Locke's notion of an educated man is very characteristic of him. Writing to Lord Peterborough, he says, "Your Lordship would have your son's tutor a thorough scholar, and I think it not much matter whether he be any scholar or no: if he but understand Latin well and have a general scheme of the sciences, I think that enough. But I would have him well-bred and well-tempered."

Disgusted with the disputes which usurped the title of Philosophy, Locke principally devoted himself to Medicine while at Oxford. His proficiency is attested by two very different persons, and in two very different ways. Dr. Sydenham, in the Dedication of his *Observations on the History and Cure of Acute Diseases*, boasts of the approbation bestowed on his Method by Mr. John Locke, "who examined it to the bottom; and who, if we consider his genius and penetrating and exact judgment, has scarce any superior, and few equals now living." The second testimony is that afforded by Lord Shaftesbury, when Locke first met him. The Earl was suffering from an abscess in the chest. No one could discover the nature of his disorder. Locke at once divined it. The Earl followed his advice, submitted to an operation, and was saved. A close intimacy sprang up between them. Locke accompanied him to London, and resided principally in his house.

His attention was thus turned to politics. His visits to Holland delighted him. "The blessings which the people there enjoyed under a government peculiarly favorable to civil and religious liberty, amply compensated, in his view, for what their uninviting territory wanted in scenery and climate."* He also visited France and Germany, making the acquaintance of several distinguished men.

In 1670 he planned his *Essay concerning Human Understand-*

* Dugald Stewart.

ing. This he did not complete till 1687. In 1675 the delicate state of his health obliged him to travel, and he repaired to the south of France, where he met Lord Pembroke. To him the *Essay* is dedicated. He returned in 1679, and resumed his studies at Oxford. But his friendship for Shaftesbury, and the liberal opinions he was known to hold, drew upon him the displeasure of the Court. He was deprived of his studentship by a very arbitrary act.* Nor did persecution stop there. He was soon forced to quit England, and find refuge at the Hague. There also the anger of the king pursued him, and he was obliged to retreat further into Holland. It was there he published his celebrated *Letter on Toleration*.

He did not return to England till after the Revolution. Then there was security and welcome. He was pressed to accept a high diplomatic office in Germany, but the state of his health prevented him. In 1690 the first edition of his *Essay* appeared. He had indeed already (1688) published an abridgment of it in Leclerc's *Bibliothèque Universelle*. The success of this *Essay* was immense; and Warburton's assertion to the contrary falls to the ground on the mere statement of the number of editions which the work rapidly went through. Six editions within fourteen years,† and in times when books sold more slowly than they sell now, is evidence enough.

The publication of his *Essay* roused great opposition. He soon got involved in the discussions with Stillingfleet, Bishop of Worcester. He was soon after engaged in the political discussions of the day, and published his *Treatise on Government*. It was about this time that he became acquainted with Sir Isaac

* See Macaulay, *History of England*, i. 545-6.

† The writer of the article *Locke*, in the *Ency. Brit.*, says that the fourth edition appeared in 1700. Victor Cousin repeats the statement, and adds that a fifth edition was preparing when death overtook the author; this fifth edition appearing in 1705. We know not on what authority these writers speak; but that they are in error may be seen by turning to Locke's *Epistle to the Reader*, the last paragraph of which announces that the edition then issued by Locke himself is the sixth.

Newton; and a portion of their very interesting correspondence has been given by Lord King in his *Life of Locke*.

Locke's health, though always delicate, had not been disturbed by any imprudences, so that he reached the age of seventy-two—a good ripe age for one who had studied and thought. He expired in the arms of his friend, Lady Masham, on the 28th of October, 1704.

§ II. ON THE SPIRIT OF LOCKE'S WRITINGS.

It has for many years been the fashion to decry Locke. Indirect sneers at his "superficiality" abound in the writings of those who, because their thought is so muddy that they cannot see its shallow bottom, fancy they are profound. Locke's "materialism" is also a favorite subject of condolence with these writers; and they assert that his principles "lead to atheism." *Lead whom?*

Another mode of undervaluing Locke is to assert that he only borrowed and popularized the ideas originated by Hobbes. The late Mr. Hazlitt—an acute thinker, and a metaphysician, but a wilful reckless writer—deliberately asserted that Locke owed every thing to Hobbes. Dr. Whewell repeats the charge, though in a more qualified manner. He says, "Hobbes had already promulgated the main doctrines, which Locke afterwards urged, on the subject of the origin and nature of our knowledge."

Again, "Locke owed his authority mainly to the intellectual circumstances of the time. Although a writer of great merit, he by no means possesses such metaphysical acuteness, or such philosophical largeness of view, or such a charm of writing, as to give him the high place he has held in the literature of Europe."

That Locke did not borrow his ideas from Hobbes will be very apparent in our exposition of Locke; but meanwhile we may quote the testimony of Sir James Mackintosh, one of the best read of our philosophers, and one intimately acquainted with both these thinkers:—

“Locke and Hobbes agree chiefly on those points in which except the Cartesians, all the speculators of their age were agreed. They differ on the most momentous questions—the sources of knowledge, the power of abstraction, the nature of the will; on the two last of which subjects, Locke, by his very failures themselves, evinces a strong repugnance to the doctrine of Hobbes. They differ not only in their premises and many of their conclusions, but in their manner of philosophizing itself. Locke had no prejudice which could lead him to imbibe doctrines from the enemy of liberty and religion. His style, with all its faults, is that of a man who thinks for himself; and an original style is not usually the vehicle of borrowed opinions.”*

To this passage we will add another from a still more distinguished judge :

“Few among the great names in philosophy have met with a harder measure of justice from the present generation than Locke, the unquestioned founder of the analytic philosophy of mind, but whose doctrines were first caricatured, then, when the reaction arrived, cast off by the prevailing school even with contumely, and who is now regarded by one of the conflicting parties in philosophy as an apostle of heresy and sophistry; while among those who still adhere to the standard which he raised, there has been a disposition in later times to sacrifice his reputation in favor of Hobbes—a great writer and a great thinker for his time, but inferior to Locke not only in sober judgment, but even in profundity and original genius. Locke, the most candid of philosophers, and one whose speculations bear on every subject the strongest mark of having been wrought out from the materials of his own mind, has been mistaken for an unworthy plagiarist, while Hobbes has been extolled as having anticipated many of his leading doctrines. He did not anticipate many of them, and the present is an instance in what manner it was generally done. [The writer is speaking of Locke’s refu-

* *Edinburgh Review* for October, 1821, p. 242.

tation of *Essences*.] They both rejected the scholastic doctrine of Essences, but Locke understood and explained what these supposed essences were. Hobbes, instead of explaining the distinction between essential and accidental properties, and between essential and accidental propositions, jumped over it, and gave a definition which suits, at most, only essential propositions, and scarcely those, as the definition of Proposition in general.”*

Dugald Stewart indeed says, “that it must appear evident Locke had diligently studied the writings of Hobbes;” but Sir J. Mackintosh, as quoted above, has explained why Locke appears to have studied Hobbes; and Stewart is far from implying that Locke therefore gained his principal ideas from Hobbes. Indeed he has an admirable note in which he points out how completely Locke’s own was the important principle of *Reflection*. “This was not merely a step *beyond* Hobbes, but the correction of an error which lies at the very root of Hobbes’s system.”†

That Locke never read Hobbes may seem incredible, but is, we are convinced, the truth. It is one among many examples of how few were the books he had read. He never alludes to Hobbes in any way that can be interpreted into having read him. Twice only, we believe, does he allude to him, and then so distantly, and with such impropriety, as to be almost convincing with respect to his ignorance. The first time is in his *Reply to the Bishop of Worcester*, in which he absurdly classes Hobbes and Spinoza together. He says, “I am not so well read in Hobbes and Spinoza as to be able to say what were their opinions on this matter, but possibly there be those who will think your Lordship’s authority of more use than *those justly decried writers*.” The form of expression, “I am not so well read,” etc., is obviously equivalent to—I have never read those justly decried writers. His second allusion is simply this:—

* Mill’s *System of Logic*, i. 150.

† *Dissertation on the Progress of Metaph. Philosophy*, p. 235 (Hamilton’s ed.). The note is very long and curious.

"A Hobbist would probably say." We cannot at present lay our hands on the passage, but it refers to some moral question.

The above is only negative evidence. Something like positive evidence however is the fact that Hobbes's doctrine of Association of Ideas—a principle as simple of apprehension as it is important—was completely unknown to Locke, who, in the fourth or fifth edition, added the chapter on association as it now stands. Moreover, Locke's statement of the law is by no means so satisfactory as that by Hobbes: he had not so thoroughly mastered it; yet had he read it in Hobbes, he would assuredly have improved on it. That he did not at first introduce it into his work is a strong presumption that he had not then read Hobbes, because the law is so simple and so evident, when stated, that it must produce instantaneous conviction.

It is strange that any man should have read Locke, and questioned his originality. There is scarcely a writer we could name whose works bear such an indisputable impress of his having "raised himself above the almsbasket, and not content to live lazily on scraps of begged opinions, set his own thoughts to work to find and follow truth." It is still more strange that any man should have read Locke and questioned his power. That patient sagacity which, above all things, distinguishes a philosopher, is more remarkable in Locke than almost any writer. He was also largely endowed with good sense; a quality, Gibbon remarks, which is rarer, than genius. In these two qualities, and in his homely racy masculine style, we see the type of the English mind, when at its best. The plain directness of his manner, his earnestness without fanaticism, his hearty honest love of truth, and the depth and pertinence of his thoughts, are qualities which, though they do not dazzle the reader, yet win his love and respect. In that volume, you have the honest thoughts of a great honest Englishman. It is the product of a manly mind: clear, truthful, direct. No vague formulas—no rhetorical flights—no base flattery of base prejudices—no assumption of oracular wisdom—no word-jugglery. There are so many writers who cover their

vanity with a veil of words, who seem profound because they are obscure, that a plainness like Locke's deceives the careless reader, who is led to suppose that what is there so plain must have been obvious.

Locke, though a patient, cautious thinker, was any thing but a timid thinker; and it does great honor to his sagacity, that at a time when all scientific men were exclaiming against the danger of hypotheses, believing that the extravagant errors of Schoolmen and alchemists were owing to their use of hypotheses—a time when the great Newton himself could be led into the unphilosophical boast *hypotheses non fingo*, our wise Locke should exactly appreciate them at their true value. He says,—

“Not that we may not, to explain any phenomena of nature, make use of any probable hypotheses whatsoever. Hypotheses, if they are well made, are at least great helps to memory, and often direct us to new discoveries. But we should not take them up too hastily (which the mind that would always penetrate into the causes of things, and have principles to rest on, is very apt to do) till we have very well examined particulars, and made several experiments in that thing which we would explain by our hypothesis, and see whether it will agree to them all; whether our principles will carry us quite through, and not be as inconsistent with one phenomenon of nature as they seem to accommodate and explain another; and, at least, that we take care that the name of principles deceive us not nor impose on us, by making us receive that for an unquestionable truth which is really at best but a very doubtful conjecture: such as are most (I had almost said all) of the hypotheses in natural philosophy.”

Locke did not seek to dazzle; he sought Truth, and wished all men to accompany him in the search. He would exchange his opinions with ease when he fancied that he saw their error. He readily retracted ideas which he had published in an immature form; “thinking himself,” as he says, “more concerned to quit and renounce any opinion of my own than oppose that of another, when truth appears against it.” He had a just and incurable

suspicion of all "great volumes swollen with ambiguous words." He knew how much jugglery goes on with words; some of it conscious, some of it unconscious, but all pernicious. "Vague and insignificant forms of speech and abuse of language have for so long passed for mysteries of science; and hard and misapplied words, with little or no meaning, have, by prescription, such a right to be mistaken for deep learning and height of speculation, that it will not be easy to persuade either those who speak, or those who hear them, that they are but the covers of ignorance and hindrance of true knowledge. To break in upon this sanctuary of vanity and ignorance will be, I suppose, some service to the human understanding."

Locke had an analytical mind. He desired to understand and to explain things, not to write rhetorically about them. There were mysteries enough which he was contented to let alone; he knew that human faculties were limited, and reverentially submitted to ignorance on all things beyond his reach. But though he bowed down before that which was essentially mysterious, he was anxious not to allow that which was essentially cognizable to be enveloped in mystery. Let that which is a mystery remain undisturbed: let that which is not necessarily a mystery be brought into the light of day. Know the limits of your understanding—*beyond* those limits it is madness to attempt to penetrate; *within* those limits it is folly to let in darkness and mystery, to be incessantly wondering and always assuming that matters cannot be so plain as they appear, and that something lying deeper courts our attention.

To minds otherwise constituted—to men who love to dwell in the vague regions of speculation, and are only at ease in an intellectual twilight—Locke is naturally a disagreeable teacher. He flatters none of their prejudices; he falls in with none of their tendencies. Mistaking obscurity for depth, they accuse him of being superficial. The owls declare the eagle is blind. They want the twilight; he

"Wantons in the smile of Jove."

They sneer at his "shallowness." So frequent are the sneers and off-hand charges against him, that I, who had read him in my youth with delight, began to suspect that my admiration had been rash. The proverb says, "Throw but mud enough, some will be sure to stick." It was so with Locke. Reiterated depreciation had somewhat defaced his image in my mind. The time came however when, for the purposes of this history, I had to read the *Essay on Human Understanding* once more, carefully, pen in hand. The image of John Locke was again revived within me; this time in more than its former splendor. His modesty, honesty, truthfulness, and directness I had never doubted; but now the vigor and originality of his mind, the raciness of his colloquial style, the patient analysis by which he has laid open to us such vast tracts of thought, and above all, the manliness of his truly practical understanding, are so strongly impressed upon me, that I feel satisfied the best answer to his critics is to say, "*Read him.*" From communion with such a mind as his, nothing but good can result. He suggests as much as he teaches; and it has been well said, "that we cannot speak of his *Essay* without the deepest reverence; whether we consider the era which it constitutes in philosophy, the intrinsic value (even at the present day) of its thoughts, or the noble devotion to truth, the beautiful and touching earnestness and simplicity which he not only manifests in himself, but has the power, beyond almost any writer, of infusing into his reader."

§ III. LOCKE'S METHOD.

"It may be said that Locke created the science of Metaphysics," says D'Alembert, "in somewhat the same way as Newton created Physics. . . . To understand the soul, its ideas and its affections, he did not study books; they would have misdirected him; he was content to descend within himself, and after having, so to speak, contemplated himself a long while, he presented in his *Essay* the mirror in which he had seen himself.

In one word, he reduced Metaphysics to that which it ought to be, viz. the experimental physics of the mind.”*

This is great praise, and from high authority, but we suspect that it can only be received with some qualification. Locke made no grand discovery which changed the face of science. He was not even the first to turn his glance inwards. Descartes and Hobbes had been before him.

Yet Locke had his Method; a Method peculiarly his own. Others before him had cast a hasty glance inwards, and dogmatized upon what they saw. He was the first to watch patiently the operations of his mind, that, watching, he might surprise the evanescent thoughts, and steal from them the secret of their combinations. He is the founder of Modern Psychology. By him the questions of Philosophy are boldly and scientifically reduced to the primary question of the limits of human understanding. By him is begun the *history* of the development and combination of our thoughts. Others had contented themselves with the thoughts as they found them; Locke sedulously inquired into the *origin* of all our thoughts.

M. Victor Cousin, who, as a rhetorician, is in constant antagonism to the clear and analytical Locke, makes it an especial grievance that Locke and his school have considered the question respecting the origin of ideas as fundamental. “It is from Locke,” he continues, “that has been borrowed the custom of referring to savages and children, upon whom observation is so difficult; for the one class we must trust to the reports of travellers, often prejudiced and ignorant of the language of the country visited; for the other class (children), we are reduced to very equivocal signs.”†

We cannot see how Locke should avoid referring to savages and children, if he wanted to collect facts concerning the origin of ideas; it is a practice inseparable from the psychological

* “En un mot, il réduisit la métaphysique à ce qu'elle doit être, en effet, la physique expérimentale de l'âme.”—*Discours Prélim. de l'Encyclopédie*.

† *Histoire de la Philos.* 17 leçon.

Method. Perhaps no source of error has been more abundant than the obstinacy with which men have in all times looked upon their indissoluble associations as irresistible truths—as primary and universal truths. A little analysis—a little observation of minds removed from the influences which fostered those associations, would prove that those associations were not universal truths, but simply associations. It is because men have analyzed the mind in its cultivated condition, that they have been led to false results; had they compared their analysis with that of an uncultivated mind, they might have gained some insight. The objection against Locke's practice could only proceed from men who study psychology without previous acquaintance with physiology—which, though they do not know it, is the same as studying functions without any knowledge of the organs. Locke was the first who systematically sought in the history of the development of the mind for answers to many of the fundamental questions of psychology, and he has been blamed for this, in the same spirit as that which dictated the sneers of John Hunter's professional contemporaries, because that admirable anatomist sought in comparative anatomy for elucidation of many anatomical problems. Now-a-days no well-informed student is ignorant of the fact that Comparative Physiology, and Embryology, are our surest guides in all biological questions, simply because we therein see the problems gradually removed from many of the complexities which frustrate our research in the higher and more completely developed organisms. Locke saw clearly enough that the philosophers were accustomed to consider their minds as types of the human mind; whereas their minds, being filled with false notions and warped by prejudices, could in nowise be taken as types; for even granting that the majority of their notions were *true*, yet these true notions were not portions of the furniture of universal minds. He sought for illustrations from such minds as had not been so warped.

His object was "to inquire into the *original, certainty, and extent* of human knowledge." He was led to this by a conver-

sation with some friends, in which, disputes growing warm, “after we had puzzled ourselves awhile, without coming any nearer a resolution of those doubts which perplexed us, it came into my thoughts that we took a *wrong course* ; and that before we set ourselves upon inquiries of that nature, it was necessary to examine our own abilities, and *see what objects our understandings were or were not fitted to deal with.*”

The plan he himself laid down is as follows :

“First, I shall inquire into the original of those ideas, notions, or whatever else you please to call them, which a man observes and is conscious to himself he has in his mind ; and the ways whereby the understanding comes to be furnished with them.

“Secondly, I shall endeavor to show what knowledge the understanding hath by those ideas ; and the certainty, evidence, and extent of it.

“Thirdly, I shall make some inquiry into the nature and grounds of faith or opinion ; whereby I mean that assent which we give to any proposition as true, of whose truth we have yet no certain knowledge ; and we shall have occasion to examine the reasons and degrees of assent.”

We may here see decisively settled the question so often raised respecting the importance of Locke's Inquiry into Innate Ideas. “For Locke and his school,” says M. Cousin, justly, “the study of understanding is the study of Ideas ; hence the recent celebrated name of Ideology for the designation of the science of mind.” Indeed, as we have shown, the origin of Ideas was the most important of all questions ; upon it rested the whole problem of Philosophy.

According to the origin of our Ideas may we assign to them their validity. If they are of human growth and development, they will necessarily partake of human limitations. As Pascal well says, “Si l'homme commençoit par s'étudier lui-même, il verroit combien il est incapable de passer outre. Comment pourroit-il se faire qu'une partie connût le tout ?”

Locke has given us a few indications of the state of opinion

respecting Innate Ideas, which it is worth while collecting. "I have been told that a short epitome of this treatise, which was printed in 1688, was condemned by some without reading, because innate ideas were denied in it, they too hastily concluding that if innate ideas were not supposed, there would be little left either of the notion or proof of spirits." Recapitulating the contents of the chapter devoted to the refutation of innate ideas, he says, "I know not how absurd this may seem to the masters of demonstration, and probably it *will hardly down with anybody at first hearing.*" And elsewhere: "What censure doubting thus of innate principles may deserve from men, who will be apt to call it pulling up the old foundations of knowledge and certainty, I cannot tell; I persuade myself at least that the way I have pursued, being conformable to truth, lays those foundations surer."

Locke's Method was purely psychological; although he had been a student of medicine, he never indulges in any physiological speculations, such as his successors, Hartley and Darwin, delighted in. Ideas, and ideas only, solicited his analysis. Dugald Stewart has remarked, that in the *Essay* there is not a single passage savoring of the anatomical theatre or of the chemical laboratory.

We have already spoken of the *positivism* of Bacon; that of Locke shall now speak for itself in his own words:—"If by this inquiry into the nature of the understanding I can discover the powers thereof, how far they reach, to what things they are in any degree proportionate, and where they fail us, I suppose it may be of use to prevail with the busy mind of man to be more cautious in meddling with the things exceeding its comprehension, to stop when it is at the utmost extent of its tether, and *sit down in a quiet ignorance of those things which upon examination are found to be beyond the reach of our capacities.* We should not then perhaps be so forward, out of an affectation of universal knowledge, to raise questions and perplex ourselves and others about things to which our understandings are not suited, and of

which we cannot frame in our minds any clear or distinct perceptions, or whereof (as it has perhaps too often happened) we have not any notions at all. Men have reason to be well satisfied with what God has thought fit for them, since he has given them, as St. Peter says, πάντα πρὸς ζωὴν καὶ εὐσέβειαν, whatsoever is necessary for the convenience of life and the information of virtue; and has put within the reach of their discovery the comfortable provision for this life, and the way that leads to a better. How short soever their knowledge may be of a universal or perfect comprehension of whatever is, it yet secures their great concerns, that they have light enough to lead them to the knowledge of their Maker and the *sight of their own duties*. Men may find matter sufficient to busy their heads and employ their hands with variety, delight, and satisfaction, if they will not boldly quarrel with their own constitutions, and throw away the blessings their hands are filled with because they are not big enough to grasp every thing.

"We shall not have much reason to complain of the narrowness of our minds, if we will but employ them about what may be of use to us, for of that they are very capable; and it will be an unpardonable as well as childish peevishness, if we undervalue the advantages of our knowledge, and neglect to improve it to the ends for which it was given us, because there are some things set out of reach of it. It will be no excuse to an idle and untoward servant who would not attend his business by candlelight, to plead that he had not broad sunshine. The candle that is set up within us shines bright enough for all our purposes.

"When we know our own strength we shall the better know what to undertake with hopes of success;* and when we have well surveyed the powers of our minds, and made some estimate what we may expect from them, we shall not be inclined either to sit still, and not set our thoughts on work at all, despairing of

* "The real cause and root of almost all the evils in science is this: that falsely magnifying and extolling the powers of the mind, we seek not its true helps."—*Bacon*.

knowing any thing; or, on the other side, question every thing, and disclaim all knowledge because some things are not to be understood. It is of great use to the sailor to know the length of his line, though he cannot with it fathom all the depths of the ocean. It is well he knows that it is long enough to reach the bottom at such places as are necessary to direct his voyage, and caution him against running upon any shoals that may ruin him. . . . This was that which gave the first rise to this Essay concerning the Understanding; for I thought that the first step towards satisfying several inquiries the mind of man was very apt to run into, was to take a survey of our own understandings, and to see to what things they were adapted. Till that was done I suspected we began at the wrong end, and in vain sought for satisfaction in a quiet and sure possession of truths that most concerned us, whilst we let loose our thoughts into the vast ocean of being; as if that boundless extent were the natural and undoubted possession of our understandings, wherein there is nothing exempt from its decisions, or that escaped its comprehension. Thus men extending their inquiries beyond their capacities, and letting their thoughts wander into those depths where they can find no sure footing, it is no wonder that they raise questions and multiply disputes, which, never coming to any clear resolution, are proper only to continue and increase their doubts, and to confirm them at last in perfect skepticism."

The decisive manner in which Locke separates himself from the ontologists is not only historically noteworthy, but is also noticeable as giving the tone to his subsequent speculations. We have admired the Portico; let us enter the Temple.

§ IV. THE ORIGIN OF OUR IDEAS.

Hobbes had said, with Gassendi, that all our ideas are derived from sensations; *nihil est intellectu quod non prius fuerit in sensu*. Locke, who is called a mere popularizer of Hobbes, said that there were *two* sources, not *one* source, and these two were SENSATION

and REFLECTION. Separating himself decisively from the upholders of the doctrine of innate ideas—of truths independent of experience,—he declared that all our knowledge is founded on experience, and from experience it ultimately derives itself. Separating himself no less decisively from the Gassendists, who saw no source of ideas but Sensation, he declared that although SENSATION was the great source of most of our ideas, yet there was “another fountain from which experience furnisheth the understanding with ideas;” and this source, “*though it be not sense*, as having nothing to do with external objects, yet it is very like it, and might properly enough be called *internal sense*.” this he calls REFLECTION.

After Dugald Stewart’s ample exposure of the wide-spread error that Locke was the chief of the so-called Sensational School, we need spend little time in inquiring whether Locke did or did not teach that all knowledge was referable to sensation. The passages which contradict the vulgar error respecting Locke’s doctrine are numerous and decisive. Dugald Stewart has selected several; but perhaps the one we have quoted above will be considered sufficiently explicit. Reflection, he says, “*though it be not sense*,” may yet analogically be considered as an internal sense. To prevent all misconception, however, we will as a decisive example refer to his proof of the existence of God, which he sums up by saying, “It is plain to me that we have a more certain knowledge of the existence of a God than of any thing our senses have not immediately discovered to us. Nay, I presume I may say that we may more certainly know that there is a God, than that there is any thing else without us.” (Book IV. ch. x.) Locke made the senses the source of all our *sensuous* knowledge; our *ideal* knowledge (so to speak) he derived from Reflection.

Historians have not accorded due praise to Locke for the important advance he made towards a solution of the great question on the origin of knowledge. While Leibnitz has been lauded to the skies for having expressed Locke’s doctrine in an epigram,

Locke has not only been robbed of his due, but has been sacrificed to his rival. It is commonly said, "Locke reduced all our knowledge to Sensation: Leibnitz came and accepted the old adage of *nihil est in intellectu quod non prius fuerit in sensu*, but he accepted it as only half the truth; and therefore added, *nisi ipse intellectus*." Now, firstly, Locke did not accept the adage as the whole truth; he said that Reflection was a second source of ideas. Secondly, Dugald Stewart has remarked that the addition which Leibnitz made when he said there is nothing in the intellect which was not previously in the sense, *except the intellect itself*, expresses no more than the doctrine of Locke, who says, "External objects furnish the mind with ideas of sensible qualities; and the mind furnishes the understanding with the ideas of its own operations." Thirdly, although the phrase is epigrammatic, and thereby has had such success in the world as epigrams usually have, it will not bear scrutiny: few epigrams will. Except as a verbal jingle, how trivial is the expression—the intellect *in* the intellect! Suppose a man to say, "I have no money in my purse, except my purse itself," he would scarcely be less absurd. For when the Schoolmen said, "nothing was in the intellect which was not previously in the sense," they did not mean that the intellect was the same as the sense; they meant that the intellect was furnished with no ideas, notions, or conceptions which had not been furnished them by sense; they meant that the senses were the inlets to the soul.

Dr. Whewell approves of the epigram; and alluding to Mr. Sharpe's objection to it, viz. that we cannot say the intellect is *in* the intellect, he says, "This remark is obviously frivolous; for the faculties of the understanding (which are what the argument against the Sensational School requires us to reserve) may be said to be in the understanding with as much justice as we may assert that there are in it the impressions derived from sense." We submit that the "faculties" of the understanding are not "*all* that must be reserved for the argument against the Sensational School" (if the Lockeists be meant, and to them only did

Leibnitz address himself), for the simple reason that the faculties *never* were denied.* Opponents have attributed such a notion to Locke's school; no member of that school ever proposed it. The question never was, *Have we an Understanding, and has that Understanding certain Faculties?* No; the question simply was—*What is the origin of our Ideas: are they partly innate and partly acquired, or are they wholly acquired, and if so, is Sense the sole inlet?* To this plain question some replied plainly, "Sense is the origin of all our ideas." Locke replied, "Sense and Reflection are the sources of all our ideas." Leibnitz replied, "There is nothing in the intellect which was not previously in the sense; except the intellect itself." which latter remark is altogether *beside* the question. And yet this remark has called forth many pages of laudatory declamation; pages in which Locke is cast into the background, and charged with having overlooked the important fact that man has an intellect as well as senses. This notion, once started, continued its triumphant course. Men are for the most part like sheep, who always follow the bell-wether: what one boldly asserts, another echoes boldly; a third transmits it to a fourth, and the assertion becomes consolidated into a traditional judgment. Some one more serious, or more independent than the rest, looks into the matter, sees an error, exposes it; but tradition rolls on its unimpeded course. I do not expect to shake the traditional error respecting Locke; I was bound, however, to signalize it. Locke does *not* derive all our knowledge from sensation; Leibnitz has *not* made any addition by his too famous *nisi ipse intellectus*.†

By Sensation, Locke understands the simple operation of exter-

* Locke often speaks of the operations of the mind as proceeding from powers intrinsic and proper to itself. He says also: "Thus the first *capacity* of human intellect is, that the mind is fitted to receive the impressions made on it; either through the senses by outward objects, or *by its own operations when it reflects on them.*"—*Essay*, b. ii. c. i. § 24.

† Leibnitz himself says, when making the distinction, "Cela s'accorde assez avec votre auteur de l'Essai, que cherche une bonne partie des Idées dans la réflexion de l'esprit sur sa propre nature."—*Nouveaux Essais*, ii. c. i.

nal objects through the senses. The mind is herein wholly passive. The senses, therefore, may be said to furnish the mind with one portion of its *materials*. By Reflection he understands that internal sense, by means of which the mind observes its own operations. This furnishes the second and last portion of the materials out of which the mind frames knowledge. "If it shall be demanded," he says, "when a man begins to have any ideas, I think the true answer is, when he first has any sensation. For since there appear not to be any ideas in the mind before the senses have conveyed any in, I conceive that ideas in the understanding are coeval with sensation." This is making a decisive stand against the upholders of innate ideas; but it is a very rude and incomplete view.

Deeply considered, not only are ideas not coeval with sensations, but sensations themselves are not coeval with the operation of external objects on our organs. Our senses have to be *educated*, *i. e.* to be drawn out, developed. We have to learn to see, to hear, and to touch. Light strikes on the infant retina, waves of air pulsate on the infant tympanum: but these as yet produce neither sight nor hearing: they are only the preparations for sight and hearing. Many hundred repetitions are necessary before what we call a sensation (*i. e.* a distinct feeling corresponding to that which the object will always produce upon the developed sense) can be produced. Many sensations are necessary to produce a perception: a perception is a cluster of sensations with an ideal element added. On the educated Sense objects act so as instantaneously to produce what we call their sensations; on the uneducated Sense they act only so as to produce a vague impression, which becomes more and more definite by repetition.*

Plato finely compares the soul to a book, of which the senses

* See this growth of sensation treated in detail in Beneke's *Lehrbuch der Psychologie*. See also the chapters on Hartley and Darwin further on.

are the scribes.* Accepting this comparison, writing is only possible after a series of tentatives; the hand must practise, before it can steady itself sufficiently to trace letters; so also must the senses learn by repetition to trace intelligible figures on the *tabula rasa* of the mind.

Locke continues his account of the origin of all our knowledge thus: "In time the mind comes to reflect on its own operations about the ideas got by sensation, and thereby stores itself with a new set of ideas, which I call ideas of reflection. These are the impressions which are made on our senses by outward objects that are extrinsical to the mind, and its own operations proceeding from powers intrinsical and proper to itself; which when reflected on by itself, becoming also objects of its contemplation, are, as I have said, the original of all knowledge. Thus the first capacity of the human intellect is, that the mind is fitted to receive the impressions made on it; either through the senses by outward objects, or by its own operations when it reflects on them. This is the first step that a man makes towards the discovery of and the groundwork whereon to build all those notions which ever he shall have naturally in this world. All those sublime thoughts which tower above the clouds, and reach as high as heaven itself, take their rise and footing here: in all that good extent wherein the mind wanders, in those remote speculations it may seem to be elevated with, it stirs not one jot beyond those ideas which sense or reflection have offered for its contemplation."

The close of this passage is an answer to the ontologists; not one, however, which they will accept. They deny that sensation and reflection are the only sources of materials. But we will continue to hear Locke: "When the understanding is once stored with these simple ideas, it has the power to repeat, compare, and unite them, even to an almost infinite variety, and so

* *Philebus*, p. 192. Plato's words are not given in the text, but the sense is.

can make at pleasure new complex ideas. But it is not in the power of the most exalted wit, or enlarged understanding, by any quickness or variety of thought, to invent or frame one new simple idea in the mind not taken in by the ways aforementioned."

This is very explicit—and, we believe, very true. If true, what becomes of Philosophy?

§ V. ELEMENTS OF IDEALISM AND SKEPTICISM IN LOCKE.

The passage last quoted naturally leads us to consider Locke's position in the great debate carried on respecting our knowledge of things *per se*.

Can we know things as they are? Descartes and his followers suppose that we can: their criterion is the clearness and distinctness of ideas. Locke admirably said, "*Distinct* ideas of the several sorts of bodies that fall under the examination of our senses, perhaps we may have; but *adequate* ideas I suspect we have not of any one amongst them." Our ideas, however clear, are never adequate; they are *subjective*. But Locke only went half-way towards the conception of knowledge as *purely* subjective. He did not think that all our ideas were images, *copies* of external objects; but he expressly taught that our ideas of what he calls *primary qualities*, are *resemblances* of what really exist in bodies; adding, that "the ideas produced in us by *secondary* qualities have no resemblance of them at all. There is nothing like our ideas existing in the bodies themselves. They are, in the bodies we denominate from them, only a *power to produce those sensations in us*."

It is remarkable that the last sentence did not lead him to the conclusion that *all* the qualities which we perceive in bodies are but the powers to produce sensations in us; and that it is we who attribute to the causes of these sensations a *form analogous to their effects*. He himself warned us "that so we may not think (as perhaps usually is done) that they (ideas) are exactly the *images and resemblances of something inherent in the subject*; most of those of sensation being in the mind *no more the like*."

ness of something existing without us, than the names that stand for them are likenesses of our ideas, which yet upon hearing they are apt to excite in us." And elsewhere, "It being no more impossible to conceive that God should annex such ideas to such motions (*i. e.* the motions of objects affecting the senses) *with which they have no similitude*, than that he should annex the idea of pain to the motion of a piece of steel dividing our flesh, with which that idea hath no resemblance."

From these passages it will be seen how clearly Locke understood the subjective nature of one portion of our knowledge. He did not carry out the application of his principles to primary qualities, owing, perhaps, to inveterate association having too firmly established the contrary in his mind. Every one is willing to admit that color, light, heat, perfume, taste, etc., are not qualities in the bodies which produce in us those effects, but simply conditions of our sensibility, when placed in certain relations with certain bodies. But few are willing to admit—indeed only philosophers (accustomed as they are to undo their constant associations) can conceive the primary qualities, viz. extension, solidity, motion, and number, to be otherwise than real qualities of bodies—*copies* of which are impressed upon us by the relation in which we stand to the bodies. And yet these qualities are no less subjective than the former. They do not belong at all to bodies, except as powers to produce in us the sensations. They are demonstrably as much the effects produced in us by objects, as the secondary qualities are; and the latter every one admits to be the *effects*, and not *copies*. Wherein lies the difference? wherein the difficulty of conceiving primary qualities not to belong to bodies? In this: the primary qualities are the *invariable* conditions of sensation. The secondary qualities are the *variable* conditions. We can have no perception of a body that is not extended, that is not solid (or the reverse), that is not simple or complex (number), that is not in motion or rest. These are *invariable* conditions. But this body is not necessarily of any particular color, taste, scent, heat, or smoothness; it may be color-

less, tasteless, scentless. These secondary qualities are all *variable*. Consequently the one set, *being invariable, have occasioned indissoluble associations* in our minds, so that it is not only impossible for us to imagine a body, without at the same time imagining it as endowed with these primary qualities; but also we are irresistibly led to believe that the bodies we perceive do certainly possess those qualities quite independently of us. Hence it has been said that the Creator himself could not make a body without extension: for such a body is impossible. The phrase should be, "such a body it is impossible for *us to conceive*." But our indissoluble associations are no standards of reality.

That *we* cannot conceive body without extension is true; but that, because we cannot conceive it, the contrary must be false, is preposterous. All our assertion in this matter can amount to is, that knowledge must be subordinate to the conditions of our nature. These conditions are not conditions of things, but of our organizations. If we had been so constituted as that all bodies should affect us with a sensible degree of warmth, we should have been irresistibly led to conclude that warmth was a quality inherent in body; but because warmth varies with different bodies and at different times, there is no indissoluble association formed. And so of the rest.

To return to Locke: he has very well stated the nature of our knowledge of external things, though he excepts primary qualities. "It is evident," he says, "that the bulk, figure, and motion of several bodies about us, produce in us several sensations, as of colors, sounds, tastes, smells, pleasure and pain, etc. These mechanical affections of bodies *having no affinity at all with those ideas they produce in us* (there being no conceivable connection between any impulse of any sort of body and any perception of a color or smell which we find in our minds) *we can have no distinct knowledge of such operations beyond our experience*; and can reason about them no otherwise than as the effects produced by an infinitely wise Agent, which perfectly surpass our comprehensions."

He shortly after says, "The things that, as far as our observation reaches, we constantly find to proceed regularly, we may conclude do act by a law set them; but yet by a law that we know not: whereby, though causes work steadily, and effects constantly flow from them, *yet their connections and dependencies being not discoverable in our ideas, we can have but an experimental knowledge of them.*" Here we have Hume's doctrine of Causation anticipated.

To prove the subjective nature of our knowledge is but one step towards the great question. The second step, which it is vulgarly supposed was only taken by Berkeley and Hume, was also taken by Locke. Hear him: "Since the mind in all its thoughts and reasonings hath no other immediate object but its own ideas, which it alone does or can contemplate, it is evident that our knowledge is only conversant about them. Knowledge, then, seems to me nothing but the perception of the connection and agreement, or disagreement and repugnancy, of any one of our ideas."

This is the great stronghold of Idealism and Skepticism. Locke foresaw the use which would be made of it; and he stated the problem with remarkable precision. "It is evident that the mind knows not things immediately, but only by the intervention of ideas it has of them. Our knowledge therefore is real, only so far as there is a conformity between our ideas and the reality of things. *But what shall be here the criterion? How shall the mind, when it perceives nothing but its own ideas, know that they agree with the things themselves?*"

Thus has he stated the problem which was solved by Idealism on the one hand, and by Skepticism on the other. Let us see how he will solve it. There are two sorts of ideas, he says, the simple and the complex; or, to use more modern language, perceptions and conceptions. The first "must necessarily be the product of things operating on the mind in a natural way, and producing those perceptions which by the wisdom and will of our Maker they are ordained and adapted to. From whence it

follows that simple ideas are not fictions of our fancies, but the natural and regular productions of things without us *really operating upon us*; and so carry with them *all the conformity which is intended*, or which *our state requires*: for they represent *things to us under those appearances which they are fitted to produce in us.*"

This leaves the question of Idealism unanswered, though it cuts the Gordian knot of Skepticism. It is a plain and explicit avowal of the subjectivity of our knowledge; of the impossibility of our ever transcending the sphere of our consciousness and penetrating into the essences of things. Complex ideas being made out of simple ideas, we need not examine their pretensions to infallibility. All human certainty is therefore only a relative certainty. Ideas may be true for us, without being at all true when considered absolutely. Such is Locke's position. He stands upon a ledge of rock between two yawning abysses. He will stand there, and proceed no further. Why should he move when he knows that a single step will precipitate him into some fathomless gulf? No; he is content with his ledge of rock. "The notice we have by our senses," he says, "of the existence of things without us, though it be not altogether so certain as our intuitive knowledge or the deductions of our reason, employed about the clear, abstract ideas of our own minds; yet it is an assurance that deserves the name of knowledge. If we persuade ourselves that our faculties act and inform us right concerning the existence of those objects that affect them, it cannot pass for an ill-grounded confidence; for I think nobody can in earnest be so skeptical as to be uncertain of the existence of those which he sees and feels. At least he that can doubt so far (whatever he may have with his own thoughts) will never have any controversy with me, since he can never be sure I say any thing contrary to his own opinions. As to myself, I think God has given me assurance enough as to the existence of things without me; since by their different application I can produce in myself both pleasure and pain, which is one great

concernment of my present state. We cannot act by any thing but our faculties; nor talk of knowledge but by the help of those faculties which are fitted to apprehend even what knowledge is."

Again, anticipating the objection that "all we see, hear, feel, and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, and therefore our knowledge of any thing be questioned; I must desire him to consider that if all be a dream, then he doth but dream that makes the question; and so it is not much matter that a waking man should answer him. But yet, if he pleases, he may dream that I make him this answer, That the *certainly* of things existing in *in rerum natura*, when we have the testimony of our senses for it, is not only *as great as our frame can attain to, but as our condition needs.*" This leaves Idealism unanswered; but it pronounces Skepticism to be frivolous: "for our faculties," he continues, "being *not suited to the full extent of being*, nor to a perfect, clear, comprehensive knowledge of things free from all doubt and scruple, but to the preservation of us, in whom they are, and accommodated to the use of life; they serve our purpose well enough, if they will but give us certain notice of those things which are convenient or inconvenient to us."

That this is very good common-sense every one will admit. But it is no *answer* to Skepticism. Hume, as we shall see hereafter, proclaimed the very same opinions: but the difference between him and Locke was, that he knew such opinions had no influence whatever upon the *philosophical* question, but simply upon the practical affairs of life; whereas Locke, contenting himself with the practical, disdained to answer the philosophical question.*

We may sum up the contents of this Section by saying that Locke distinctly enough foresaw the Idealistic and Skeptical

* Dr. Reid conjectures that "Locke had a glimpse of the system which Berkeley afterwards advanced, though he thought proper to suppress it within his own breast." Not to suppress, but to disdain it.

arguments which might be drawn from his principles. He did not draw them, because he thought them frivolous. Aware that all human certitude could only be relative certitude—that human knowledge could never embrace the nature of things, but only the nature of their effects on us—he was content with that amount of truth, and “sat down in quiet ignorance of those things which are beyond the reach of our capacities.” The grand aim of the *Essay* was to prove that all knowledge is founded on experience. That proved, he was aware that Experience never could be other than relative—it could only be *our* Experience of things; and our Experience could be no *absolute* standard; it could only be a standard for us.

§ VI. LOCKE'S CRITICS.

We cannot leave the great Englishman without adverting to the tone adopted by many of his critics. This tone has been any thing but considerate. The sincerest and least dogmatic of thinkers has, for the most part, met with insincere and shallow criticism.

That men should misrepresent Spinoza, Hobbes, or Hume, is intelligible enough; men are frightened, and in their terror exaggerate and distort what they see. That they should misrepresent Kant, Fichte, or Hegel, is also intelligible; the remoteness of the speculations, and the difficulty of the language, are sufficient excuses. But that they should misrepresent Locke is wholly inexcusable. He was neither an audacious speculator, nor a cloudy writer. His fault was that he spoke plainly and honestly. He sought the truth; he did not wish to mystify any one. He endeavored to explain the Chemistry of the Mind (if the metaphor be permissible), renouncing the vague, futile dreams of Alchemy. All those men who still seek to penetrate impenetrable mysteries, and refuse to acknowledge the limits of man's intelligence, treat Locke with the same superb disdain as the ambitious alchemists treated the early chemists. The tone in which most modern Frenchmen and Germans speak of Locke

is painful; the tone in which many Englishmen speak of him is disgraceful. To point out any error is honorable; but to accuse him of errors which are not to be found in his work, to interpret his language according to your views, and then accuse him of inconsistency and superficiality; to speak of him with superciliousness, as if he were some respectable but short-sighted gentleman dabbling with philosophy, and not one of the great benefactors of mankind, deserves the severest reprobation.*

There is no excuse for not understanding Locke. If his language be occasionally loose and wavering, his meaning is always to be gathered from the context. He had not the lucidity of Descartes or Hobbes; but he was most anxious to make himself intelligible, and to this end he varied his expressions, and stated his meaning in a variety of forms. He must not be taken literally. No single passage is to be relied on, unless it be also borne out by the whole tenor of his speculations. Any person merely "dipping into" the Essay, will find passages which seem very contradictory; any person carefully reading it through will find all clear and coherent.

The most considerable of Locke's modern critics is Victor Cousin. He has undertaken an examination and refutation of all Locke's important positions. The eminence of his name and the popular style of his lectures have given great importance to his criticism; but if we are to speak out our opinion frankly, we must characterize this criticism as very unfair, and extremely shallow. We cannot here examine his examination: a volume would not suffice to expose all his errors. Let one example of his unfairness, and one of his shallowness, suffice.

Speaking of the principle of reflection, he says: "In the first place, remark that Locke here evidently confounds reflection with consciousness. Reflection, strictly speaking, is doubtless a faculty analogous to consciousness, but distinct from it, and which

* On this point, consult Dr. Vaughan's vigorous defence of Locke against his critics in the *Essays on History, Philosophy, etc.*

more particularly belongs to philosophers, whereas consciousness belongs to every man."

We answer, that in the first place, so far from its being evident that Locke confounds reflection with consciousness, his whole Essay proves the contrary. In the second place, M. Cousin, using the word reflection in a peculiar sense (*viz.* as tantamount to speculation), forces that sense upon Locke, and thus makes the contradiction! If M. Cousin had interpreted Locke fairly, he could never have thus "caught him on the hip."

It is quite true that in the passage quoted by M. Cousin, the faculty of reflection is limited to the operations of the mind; but, as we said, to pin Locke down to any one passage is unfair; and his whole Essay proves, in spite of some ill-worded definitions, that by reflection he meant very much what is usually meant by it, *viz.* the activity of the mind in combining the materials it receives through sense, and becoming thus a source of ideas.

This leads us to the second example. M. Cousin wishing to prove, against Locke, that we have ideas from some other source besides sensation and reflection, instances the idea of space, and examines how it was possible to obtain that idea through sensation and reflection. That the idea of pure space could not have been obtained through the senses he seems to think is satisfactorily proved by proving that the idea has nothing sensuous in it; that it could not have been obtained through reflection, because it has nothing to do with the operations of our understanding, is equally evident to him. Hence, as both sources fail, he pronounces Locke's account of the origin of our knowledge "incomplete and vicious."

This argument, which extends to several pages, is deemed by M. Cousin triumphant. Locke indeed says that "we get the idea of space both by our sight and touch." Any honest inquirer would never quibble upon this—would never suppose Locke meant to say that space is a *sensation*. He would understand that Locke meant to say, "the idea of space is an abstraction: the primary materials are obtained through our touch and sight."

Locke did not anticipate any quibbling objection, so did not guard against it; but in his explanation of our idea of substance he has given an analogous case; although his antagonists have also frequently objected that the idea of substance never could have been obtained through sense. It has been thought an irresistible argument against Locke's theory: the very fact that we have an idea of substance is supposed to be sufficient proof of some other source of knowledge than sensation and reflection. This is an example of how carelessly Locke has been read. He expressly tells us, in more places than one, that the idea of substance (and by idea he does not here mean *image*, but a *thought*) is an inference grounded upon our experience of external things. True it is that we perceive nothing but phenomena, but our minds are so constituted that we are forced to suppose these phenomena have substances lying underneath them.

"If any one will examine himself," he says, "concerning his notion of pure substance in general, he will find he has no other idea of it at all, but only a supposition of he knows not what support of such qualities which are capable of producing simple ideas in us, which qualities are commonly called accidents. If any one should be asked what is the subject wherein color or weight inheres, he would have nothing to say but the solid extended parts; and if he were demanded what is it that solidity and extension inhere in, he would not be in a much better case than the Indian who, saying that the world was supported by a great elephant, was asked what the elephant rested on, to which his answer was, A great tortoise; but being again pressed to know what gave support to the great broad-backed tortoise, replied, Something, he knew not what."

The same course of argument will apply to space. Space is an idea suggested by *place*, which is surely one derived from the senses; but M. Cousin declaims away at a great rate, and brings forward many arguments and illustrations, all utterly trivial, to show that the idea of space could never have been a sensation. A little more attention in reading the author he attacks would

have saved him all this trouble. Locke never for an instant supposed that the idea of space could have been a sensation: on the fact that it could not, he grounds his position that the idea is vague, and is a mere "supposition."

The German critics we may pass over in silence. The whole tenor of their speculations unfits them for judging Locke. But let us hear an Englishman, who is also an historian:—"We need not spend much time in pointing out the inconsistencies into which Locke fell," says Dr. Whewell, "as all must fall into inconsistencies who recognize no source of knowledge except the senses." Let us remark, in the first place, that it is surely a questionable procedure thus to pass over so great a man as Locke, whose influence has been so general and lasting, and whose "inconsistencies" it behooved Dr. Whewell, more than most men, to refute, inasmuch as Locke's principles refute *his* whole philosophy. Secondly, it is a misrepresentation to assert Locke's having recognized "no source of knowledge except the senses." On reconsideration he must admit that Locke *did* recognize another source. "Thus he maintains," continues Dr. Whewell, "that our idea of space is derived from the senses of sight and touch—our idea of solidity from the touch alone. Our notion of substance is an unknown support of unknown qualities, and is illustrated by the Indian fable of the tortoise which supports the elephant which supports the world."

Space we have already considered in answering M. Cousin. As to solidity, if the idea be not derived from the sensation, from whence is it derived? And as to substance, we must here again notice a misrepresentation of Locke, who does not define it as "an unknown support of unknown qualities," but as an unknown support of *known* qualities: from our knowledge of the qualities we infer the existence of some substratum in which they inhere. We are, with respect to substance, somewhat in the condition of a blind man, who, whenever he moved in a certain direction, should receive a blow from some revolving wheel. Although unable to see the wheel, and so understand the cause of the pain

he received, he would not hesitate to attribute that cause to something without him. All he could ever know, unassisted, would be the fact of his being struck when he moved in a certain direction; he could have no other knowledge of the wheel, yet he would be quite certain that there was something besides his pain, and that unknown something would stand to him in a relation somewhat similar to that in which the unknown support of known accidents of bodies stands to us. This is Locke's meaning.

"Our notion of power or cause," continues the historian, "is in like manner got from the senses; and yet, though these ideas are thus mere fragments of our experience, Locke does not hesitate to ascribe to them necessity and universality when they occur in propositions. Thus he maintains the necessary truth of geometrical properties; he asserts that the resistance arising from solidity is absolutely insurmountable; he conceives that nothing short of Omnipotence can annihilate a particle of matter; and he has no misgivings in arguing upon the axiom that every thing must have a cause. He does not perceive that upon his own account of the origin of our knowledge, we can have no right to make any of these assertions. If our knowledge of the truths which concern the external world were wholly derived from experience, all that we could venture to say would be, that geometrical properties of figures are true *as far as we have tried them*; that we have seen *no example* of a solid body being reduced to occupy less space by pressure, or of a material substance annihilated by natural means; and that, *wherever we have examined*, we have found that every change has had a cause."

This is only one among many instances of Dr. Whewell's want of accurate interpretation of Locke. The fallacy on which his argument rests, we shall examine at some length when we come to treat of Kant. Meanwhile let the following passage prove that he has misconceived Locke, who certainly did not hesitate to ascribe necessity and universality to certain ideas when they "occur in propositions," but who very clearly explained the na-

ture of this necessity in a masterly passage: "There is one sort of propositions concerning the existence of any thing answerable to such an idea; as having the idea of an elephant, phoenix, motion, or angle, in my mind, the first and natural inquiry is, whether such a thing does anywhere exist. And this knowledge is only of particulars. No existence of any thing without us, except God, can certainly be known further than our senses inform us.

"There is another sort of propositions, wherein is expressed the agreement or disagreement of our abstract ideas and their dependence on one another. *Such propositions may be universal and certain.* So, having the idea of God and of myself, of fear and obedience, I cannot but be sure that God is to be feared and obeyed by me: and this proposition will be certain concerning man in general, *if I have made an abstract idea of such species whereof I am one particular.* But yet this proposition, how certain soever, that men ought to fear and obey God, proves not to me the existence of men in the world, but *will be true of all such creatures wherever they do exist:* which certainty of such general propositions depends on the agreement or disagreement to be discovered in those abstract ideas. In the former case our knowledge is the consequence of the existence of things producing ideas in our minds by our senses; in the latter, knowledge is the consequence of the ideas (be they what they will) that are in our minds producing their general certain propositions.

"Many of these are called *æternæ veritates*; and all of them indeed are so; not from being written in the minds of all men, or that they were any of them propositions in any one's mind till he, having got the abstract ideas, joined or separated them by affirmation or negation. But wheresoever we can suppose such a creature as man is, endowed with such faculties, and thereby furnished with such ideas as we have, we must conclude he must needs, when he applies his thoughts to the consideration of his ideas, know the truth of certain propositions that will arise

from the agreement or disagreement which he will perceive in his own ideas. Such propositions therefore are called eternal truths, not because they are eternal propositions actually formed and antecedent to the understanding that makes them; nor because they are imprinted on the mind from any patterns that are anywhere of them out of the mind and existed before; but because being once made about abstract ideas so as to be true, they will, whenever they can be supposed to be made again at any time by a mind having those ideas, always actually be true.”* This passage is sufficient to exonerate him from the charge of inconsistency; sufficient also, we believe, to show the error of Dr. Whewell’s own conception of the necessity of certain truths.

The foregoing are samples of the style in which the great master of Psychology is spoken of by his most modern critics. Let them be sufficient warning to the reader of what he is to expect from the partisans of the reaction against Locke, and his followers; and stimulate him to the careful study of that author who “professes no more than to lay down, candidly and freely, his own conjectures concerning a subject lying somewhat in the dark, without any other design than an unbiased inquiry after truth.”

* Book iv. ch. xi. §§ 13, 14.

CHAPTER III.

LEIBNITZ.

LEIBNITZ was the first and last of Locke's great critics. He had studied the *Essay on the Human Understanding*, though he could not accept its principles. His arguments have formed the staple of objection against Locke; and from him they come with peculiar force, because they are parts of his system.

Leibnitz has a great reputation in philosophy and mathematics; but the nature of this work forbids our entering into any detailed examination of his claims, inasmuch as he introduced no new ideas, no new extension of old methods. All that can here be done is to indicate the line of opposition which he took with respect to Locke's theory of the origin of Knowledge.

At first he answered Locke in a few paragraphs of a somewhat supercilious tone. He evidently looked upon the *Essay* as not destined to achieve any influential reputation.* This opinion he lived to alter; and in his *Nouveaux Essais sur l'Entendement Humain*, he brought all his forces to bear upon the subject; he grappled with the *Essay*, and disputed the ground with it inch by inch. This remarkable work was not published till many years after his death, and is not included in M. Dutens' edition. Dugald Stewart was not aware of its existence; and this fact will explain a passage in his *Dissertation*, where he says that Leibnitz always speaks coldly of Locke's *Essay*. Leibnitz does so in his earlier works; but in the *New Essays* he treats his great adversary with due respect; and in the Preface, speaks of him with eulogy. "The *Essay concerning Human Understanding*, writ-

* See *Réflexions sur l'Essai de M. Locke*, in the *Recueil* of Desmaizeaux, vol. ii.

ten by an illustrious Englishman, being one of the finest and most esteemed works of our time, I have resolved to make some comments on it. . . . Thus I shall procure a favorable introduction for my thoughts by placing them in such good company.

. . . It is true that I am often of a different opinion; but so far from detracting on that account from the merit of this celebrated writer, that I do him justice in making known in what and wherefore I differ from him, when I judge it necessary to prevent his authority from prevailing over reason on some important points. In fact, although the author of the *Essay* says a thousand things which I must applaud, yet our systems greatly differ. His has greater affinity to that of Aristotle,—mine, to that of Plato.” This is the spirit in which the Homeric heroes regard their adversaries; an interchange of admiration for each other’s prowess does not deaden one of their blows, but it makes the combat more dignified.

Leibnitz belonged to the Cartesians; but he also mingled with the doctrines of Descartes certain ideas which he had gathered from his commerce with antiquity. Plato, and Democritus especially, influenced him. To a mind thus furnished, the doctrines of Locke must needs have been unwelcome; indeed they could not be expected to gain admission. Moreover, as F. Schlegel well observed, every man is born either a Platonist or an Aristotelian.* Leibnitz and Locke were examples of this antagonism: “Our differences,” says Leibnitz, “are important. The question between us is whether the soul in itself is entirely empty, like tablets upon which nothing has been written (*tabula rasa*), according to Aristotle and the author of the *Essay*; and whether all that is there traced comes wholly from the senses and experience; or whether the soul originally contains the principles of several notions and doctrines, which the external objects only awaken on occasions, as I believe with Plato.”

* Coleridge used to pass off this aphorism as his own. It is to be found however in Schlegel’s *Geschichte der Literatur*.

The nature of the problem is well stated here; and Leibnitz sides with Plato in his solution of it. The main arguments by which he supports his view are those so often since repeated of the Universality and Necessity of certain truths, and of the incapacity of experience to furnish us with any thing beyond a knowledge of individual cases. "For if any event can be foreseen before it has been tried, it is manifest that *we* contribute something for our own parts." *Ergo*, mere experience, it is argued, does *not* constitute all our knowledge. "The senses, although *necessary* for all actual knowledge, are not sufficient to *give* us all of it; since the senses never can give but examples, that is to say particular or individual truths. But all the examples which confirm a general truth, however numerous, do not suffice to establish the universal necessity of that truth; for it does not follow that that which has once occurred will always occur in the same way."

Leibnitz continues: "Whence it appears that necessary truths, such as we find in mathematics, and particularly in arithmetic and geometry, must have principles of which the proof does not depend upon examples, nor consequently upon the senses, although without the senses one would never have thought of them. So also logic, metaphysics, and morals are full of such truths, and consequently their proofs can only come from those internal principles which are called *innate*."

Locke would perfectly have agreed with these premises, but the conclusion he would rightly have rejected. That the senses alone could not furnish us with any general truth, he taught as expressly as Leibnitz did; but this in no way affects his system, for he did not build his system upon the senses alone.

Leibnitz however seems to have been misled by Locke's language in the first definition of Reflection; for he says, "Perhaps the opinions of our able author are not so far from mine as they appear to be. For after having employed the whole of his first book against innate knowledge taken in a certain sense, he acknowledges in the beginning of the second that there are ideas which do not originate from the senses, but arise from Re-

lection. Now reflection is nothing but attention to that which passes within us; and *the senses do not convey to us what we already possess within ourselves*. Can it then be denied that there is much innate in the mind?"

The passage in italics is a curious instance of how the mind, preoccupied with its own opinions, sees them reflected in the expressions of others. Leibnitz here assumes the very point at issue; assumes that the mind has innate ideas which the senses cannot convey to it; and this assumption he supposes to be contained in Locke's words. Locke taught precisely the contrary. "The mind is itself innate," continues Leibnitz—to which we reiterate our objection: innate in *what*? In itself? or in us? To say that it is innate in itself is a quibble; that it is innate in *us* is a displacement of the question: no one ever doubted that the mind of man was born in man—born with man; the question was, Are there any ideas born *with* the mind, or are all ideas acquired *by* the mind?) "The mind is itself innate, and there are included in it substance, duration, change, action, perception, pleasure, and a thousand other objects of our intellectual ideas. . . . I have used the comparison of a block of marble which has certain veins in it, rather than a plain piece of marble such as the philosophers call *tabula rasa*; because if the soul resembled tablets unwritten on, truths would be in us like the figure of Hercules in the block of marble, when that marble may receive indifferently one figure or another. But if there are veins in the marble which mark the figure of Hercules rather than any other figure, that marble would be more determinate, and the figure of Hercules would in some way be innate, although labor would be necessary to discover the veins, and to free them from their envelopment of marble. Thus are ideas and truths innate in us."

This is an ingenious statement of the theory: unfortunately for it, the very existence of these veins in the marble is an assumption, and an assumption not made for the facilitating of inquiry, but simply for the proof of the theory assumed; it is

an hypothesis framed for the sake of explaining—what?—the hypotheses itself! Ideas are first assumed to be innate; to prove this assumption, another assumption—the existence of innate ideas—is made; and the theory is complete.

The real force of Leibnitz's theory lies in his distinction between contingent and necessary truths, and in his position that experience alone could never furnish us with necessary truths. The examination of this we must delay till we come to Kant.

A brief view of the celebrated scheme of *Pre-established Harmony* will be all that is necessary to complete what we have here to say of Leibnitz. It was in those days an axiom universally admitted that "Like could only act upon Like." The question then arose: how does body act upon mind; how does mind act upon body? The two were utterly *unlike*: how could they act upon each other? In other words: how is Perception possible? All the ordinary explanations of Perception were miserable failures. If the mind perceives copies of things, how are these copies transmitted? Effluvia, eidola, images, motions in spirits, etc., were not only hypotheses, but hypotheses which bore no examination: they did not get rid of the difficulty of two unlike substances acting upon each other.

Leibnitz borrowed this hypothesis from Spinoza—whom, by the way, he always abuses: The human mind and the human body are two *independent but corresponding* machines. They are so adjusted that they are like two unconnected clocks constructed so that at the same instant one should *strike* the hour and the other *point* it. "I cannot help coming to this notion," he says, "that God created the soul in such a manner at first, that it should *represent* within itself all the simultaneous changes in the body; and that he has made the body also in such a manner as that it must of itself do what the soul wills: so that the laws which make the thoughts of the soul follow each other in regular succession, *must* produce *images* which shall be coincident with the impressions made by external objects upon our organs of sense; while the laws by which the motions of the

body follow each other are likewise so coincident with the thoughts of the soul as to give to our *volitions* and *actions* the very same appearance as if the latter were really the natural and the necessary consequences of the former.”*

This hypothesis has been much ridiculed by those unaware of the difficulties it was framed to explain. It is so repugnant however to all ordinary views, that it gained few, if any, adherents.

CHAPTER IV.

SUMMARY OF THE THIRD EPOCH.

THE result of the speculations we have been considering—speculations begun by Gassendi and Hobbes, and further developed by Locke—was to settle, for a long while, the dispute respecting Experience, and to give therefore a new direction to inquiry.

It was considered as established,—1st. That we could have no knowledge not derived from experience. 2d. That experience was of two kinds, viz. of external objects and of internal operations; therefore there were two distinct sources—sensation and reflection. 3d. That all knowledge could only consist in the agreement or disagreement of our ideas. 4th. Finally, that we could never know things in themselves, but only things as they affect us; in other words, we could only know our ideas.

To this had Locke brought Philosophy. Rightly interpreted, it was a denial of all Philosophy—a demonstration of its impossibility; but this interpretation Locke did not put upon his doctrines. That remained for Hume. Locke’s system produced three distinct systems: Berkeley’s Idealism, Hume’s Skepticism, and Condillac’s Sensationalism.

* The best edition of Leibnitz’s works is that by Erdmann—*Leibniti Opera Philosophica*: Berlin, 1839. The *Nouveaux Essais* are there for the second time published (the first was in Raspe’s edition, Leipzig, 1765); and they have been since republished in a cheap and convenient form by M. Jacques: Paris, 1845.

FOURTH EPOCH.

THE SUBJECTIVE NATURE OF KNOWLEDGE LEADS TO IDEALISM.

CHAPTER I.

BERKELEY.

§ I. LIFE OF BERKELEY.

THERE are few men of whom England has better reason to be proud than of George Berkeley, Bishop of Cloyne. To extraordinary merits as a writer and thinker, he united the most exquisite purity and generosity of character; and it is still a moot-point whether he was greater in head or heart.

He was born on the 12th of March, 1684, at Kilkrin, in the county of Kilkenny; and educated at Trinity College, Dublin, where, in 1707, he was admitted as a Fellow. In 1709, he published his *New Theory of Vision*, which made an epoch in Science; and the year after, his *Principles of Human Knowledge*, which made an epoch in Metaphysics. After this he came to London, where he was received with open arms. "Ancient learning, exact science, polished society, modern literature, and the fine arts, contributed to adorn and enrich the mind of this accomplished man. All his contemporaries agreed with the Satirist in ascribing

'To Berkeley every virtue under heaven.'

Adverse factions and hostile wits concurred only in loving, admiring, and contributing to advance him. The severe sense of

Swift endured his visions; the modest Addison endeavored to reconcile Clarke to his ambitious speculations. His character converted the satire of Pope into fervid praise. Even the discerning, fastidious, and turbulent Atterbury said, after an interview with him, 'So much learning, so much knowledge, so much innocence, and such humility, I did not think had been the portion of any but angels, till I saw this gentleman.'**

His acquaintance with the wits led to his contributing to the *Guardian*. He became chaplain and afterwards secretary to the Earl of Peterborough, whom he accompanied on his embassy to Sicily. He subsequently made the tour of Europe with Mr. Ashe, and at Paris met Malebranche, with whom he had an animated discussion on the ideal theory. In 1724 he was made Dean of Derry. This was worth eleven hundred pounds a year to him; but he resigned it in order to dedicate his life to the conversion of the North American savages, stipulating only with the Government for a salary of one hundred pounds a year. On this romantic and generous expedition he was accompanied by his young wife. He set sail for Rhode Island, carrying with him a valuable library of books, and the bulk of his property. But, to the shame of the Government, be it said, the promises made him were not fulfilled, and after seven years of single-handed endeavor, he was forced to return to England, having spent the greater part of his fortune in vain.

He was made Bishop of Cloyne in 1734. When he wished to resign, the King would not permit him; and being keenly alive to the evils of non-residence, he made an arrangement before leaving Cloyne, whereby he settled £200 a year, during his absence, on the poor. In 1752, he removed to Oxford, where, in 1753, he was suddenly seized, while reading, with palsy of the heart, and died almost instantaneously.

Of his numerous writings we cannot here speak; two only belong to our subject: the *Principles of Knowledge*, and the

* Sir J. Mackintosh.

Dialogues of Hylas and Philonous. We hope to remove some of the errors and prejudices with which his name is incrustated. We hope to show that, even in what are called his wildest moods, Berkeley was a plain, sincere, deep-thinking man, not a sophist, playing with paradoxes to display his skill.

§ II. BERKELEY AND COMMON SENSE.

All the world has heard of Berkeley's Idealism; and innumerable "coxcombs" have vanquished it "with a grin."* Ridicule has not been sparing. Argument has not been wanting. Idealism has been laughed at, written at, talked at, shrieked at. That it has been *understood* is not so apparent. In reading the criticisms upon his theory it is quite ludicrous to notice the constant iteration of trivial objections, which, trivial as they are, Berkeley had already anticipated. In fact the critics misunderstood him, and then reproached him for inconsistency—inconsistency, not with *his* principles, but with *theirs*. They forced a meaning upon his words which he had expressly rejected; and then triumphed over him because he did not pursue their principles to the extravagances which would have resulted from them.

When Berkeley denied the existence of matter, he meant by "matter" that unknown *substratum*, the existence of which Locke had declared to be a necessary *inference* from our knowledge of qualities, but the nature of which must ever be altogether hidden from us. Philosophers had assumed the existence of Substance, *i. e.* of a *noumenon* lying underneath all *phenomena*—a substratum supporting all qualities—a *something* in which all accidents *inhere*. This unknown Substance, Berkeley rejects. It is a mere abstraction, he says. If it is unknown, unknowable, it is a figment, and I will none of it; for it is a figment worse than useless; it is pernicious, as the basis of all atheism. If by matter you understand *that* which is seen, felt, tasted, and touched, then I say matter exists: I am as firm a believer in its exist-

* "And coxcombs vanquish Berkeley with a grin."—*Pope*.

ence as any one can be, and *herein I agree with the vulgar*. If, on the contrary, you understand by matter that occult *substratum* which is *not* seen, *not* felt, *not* tasted, and *not* touched—that of which the senses do not, cannot, inform you—then I say I believe not in the existence of matter, and *herein I differ from the philosophers and agree with the vulgar*.

“I am not for changing things into ideas,” he says, “but rather ideas into things; since those *immediate objects of perception*, which, according to you (Berkeley might have said according to all philosophers) are only *appearances of things*, I take to be the real things themselves.

“*Hylas*. Things! you may pretend what you please; but it is certain you leave us nothing but the empty forms of things, the *outside of which only strikes the senses*.

“*Philonous*. What you call the empty forms and outside of things seem to *me* the very things themselves. . . . We both therefore agree in this, that we perceive only sensible forms; but herein we differ: you will have them to be empty appearances; I, real beings. In short, *you do not trust your senses; I do*.”

Berkeley is always accused of having propounded a theory which contradicts the evidence of the senses. That a man who thus disregards the senses must be out of his own, was a ready answer; ridicule was not slow in retort; declamation gave itself elbow-room, and exhibited itself in a triumphant attitude. It was easy to declare that “the man who seriously entertains this belief, though in other respects he may be a very good man, as a man may be who believes he is made of glass; yet surely he hath a soft place in his understanding, and hath been hurt by much thinking.”*

Unfortunately for the critics, Berkeley did *not* contradict the evidence of the senses; did *not* propound a theory at variance in this point with the ordinary belief of mankind. His peculiarity is, that he confined himself exclusively to the evidence of

* Reid, *Inquiry*.

the senses. What the senses informed him of, that, and *that only*, would he accept. He held fast to the facts of consciousness; he placed himself resolutely in the centre of the instinctive belief of mankind: there he took his stand, leaving to philosophers the region of supposition, inference, and of occult substances.

The reproach made to him is really the reproach he made to philosophers, namely, that they would not trust to the evidence of their senses; that over and above what the senses told them, they imagined an occult something of which the senses gave no indication. "Now it was against this metaphysical phantom of the brain," says an acute critic, "this crotchet-world of philosophers, and against it alone, that all the attacks of Berkeley were directed. The doctrine that the realities of things were not made for man, and that he must rest satisfied with mere appearances, was regarded, and rightly, by him, as the parent of skepticism with all her desolating train. He saw, that philosophy, in giving up the reality immediately within her grasp, in favor of a reality supposed to be less delusive, which lay beyond the limits of experience, resembled the dog in the fable, who, carrying a piece of meat across a river, let the substance slip from his jaws, while with foolish greed he snatched at the shadow in the stream. The dog lost his dinner, and philosophy let go her secure hold upon truth. He therefore sided with the vulgar, who recognize no distinction between the reality and the appearance of objects, and, repudiating the baseless hypothesis of a world existing unknown and unperceived, he resolutely maintained that what are called the sensible shows of things are in truth the very things themselves."*

True it is that, owing to the ambiguities of language, Berkeley's theory does seem to run counter to the ordinary belief of mankind, because by Matter men commonly understand the

* *Blackwood's Mag.*, June, 1842, p. 814, art. *Berkeley and Idealism*: understood to have been written by Professor Ferrier.

Seen, the Tasted, the Touched, etc.; therefore when the existence of matter is denied, people naturally suppose that the existence of the Seen, the Tasted, and the Touched is denied, never suspecting that Matter, in its philosophical sense, is the *not* seen, *not* tasted, *not* touched. Berkeley has not, it must be confessed, sufficiently guarded against all ambiguity. Thus he says in one of the opening sections of his *Principles of Human Knowledge*, that "it is indeed *an opinion strangely prevailing amongst men* that houses, mountains, rivers, and, in a word, all sensible objects, have an existence, natural or real, distinct from their being perceived by the understanding." This is striking a false keynote. It rouses the reader to oppose a coming paradox. Yet Berkeley foresaw and answered the objections which Wimpey, Beattie, Reid, and others brought forward. He was not giving utterance to a caprice; he was not spinning an ingenious theory, knowing all the while that it was no more than an ingenuity. He was an earnest thinker, patient in the search after truth. Anxious therefore that his speculations should not be regarded as mere dialectical displays, he endeavored on various occasions to guard himself from misapprehension.

"I do not argue against the existence of any one thing that we can apprehend either by sensation or reflection. *That the things I see with my eyes and touch with my hands do exist, really exist, I make not the least question. The only thing whose existence I deny is that which philosophers call Matter, or corporeal substance.* And in doing this there is no damage done to the rest of mankind, who, I dare say, will never miss it. . . .

"If any man thinks we detract from the reality or existence of things, he is very far from understanding what has been premised in the plainest terms I could think of. . . . It will be urged that thus much at least is true, viz. that we take away all corporeal substances. To this my answer is, that if the word *substance* be taken in the vulgar sense for a combination of sensible qualities, such as extension, solidity, weight, etc., this we

cannot be accused of taking away.* But if it be taken in the philosophic sense, for the support of accidents or qualities without the mind; then, indeed, I acknowledge that we take it away, if one may be said to take away that which never had any existence, not even in the imagination.† But say what we can, some perhaps may be apt to reply, he will still believe his senses, and never suffer any arguments, however plausible, to prevail over the certainty of them. Be it so: assert the evidence of sense as high as you please, *we are willing to do the same*. That what I see, hear, and feel, doth exist, *i.e.* is perceived by me, I no more doubt than I do of my own being; *but I do not see how the testimony of sense can be alleged as a proof of any thing which is not perceived by sense.*"‡

After reading these passages (and more of a similar cast might be quoted), in what terms shall we speak of the works written to refute Idealism? Where was the acuteness of the Reids and Beatties, when they tauntingly asked why Berkeley did not run his head against a post, did not walk over precipices, etc., as, in accordance with his theory, no pain, no broken limbs could result?§ Where was philosophical acumen, when writers could imagine they refuted Berkeley by an appeal to common sense—when they contrasted the instinctive beliefs of mankind with the speculative paradoxes of a philosopher, who

* An answer to Dr. Johnson's peremptory refutation of Berkeley, viz. kicking a stone; as if Berkeley ever denied that what we call stones existed!

† This is not well said. That substance was *imagined* to exist (as a support of accidents) Berkeley's argument supposes: it is against such an imaginary existence he directs his attacks. Perhaps he means that no *image* of substance could be formed in the mind; which no one disputes.

‡ *Principles of Human Knowledge*, sections 35, 36, 37, 40.

§ "But what is the consequence? I resolve not to believe my senses? I break my head against a post that comes in my way; I step into a dirty kennel; and after twenty such wise and rational actions I am taken up and clapt into a madhouse. Now I confess I had rather make one of those credulous fools whom nature imposes upon, than of those wise and rational philosophers who resolve to withhold assent at all this expense."—Reid's *Inquiry*, ch. 4, § 20. This one passage is as good as a hundred.

expressly took his stand beside common sense against philosophers?

Men trained in metaphysical speculations may find it difficult to conceive the non-existence of an invisible unknowable substratum; but that the bulk of mankind find 't almost impossible to conceive any such substratum, is a fact which the slightest inquiry will verify. We remember a discussion which lasted an entire evening, in which by no power of illustration, by no force of argument, could the idea of this substance, apart from its sensible qualities, be rendered conceivable to our antagonist.

Berkeley therefore, in denying the existence of matter, sided with common sense. He thought, with the vulgar, that matter was that of which his senses informed him; not an occult something of which he could have no information. The table he saw before him certainly existed: it was hard, polished, colored, of a certain figure, and cost some guineas. But there was no *phantom table* lying underneath the *apparent table*—there was no invisible substance supporting that table. What he perceived was a table, and nothing more; what he perceived it to be, he would believe it to be, and nothing more. His starting-point was thus what the plain dictates of his senses, and the senses of all men, furnished.

§ III. IDEALISM.

The first step which a philosopher takes in any inquiry is a departure from Common Sense. Reflecting upon what his senses convey to him, he seeks an explanation of phenomena: and it is in proportion to the care with which he analyzes the facts to be explained, that he is usually supposed to be free from the mere extravagances of speculation. And yet Berkeley's rigorous analysis of the facts of consciousness has obtained for him the reputation of being one of the most extravagant of speculators!

This is the problem: our senses inform us of the existence of

certain sensible qualities, such as extension, color, solidity, etc. But our reason tells us that these qualities must be qualities of something: they cannot exist as mere extension, color, etc.: there must be something extended, colored, etc. What is that something? The solution given by the philosophers was uniformly this: *what* that substance is we can never know, because it lies beyond our apprehension; but we are forced to admit it, as a support to the qualities which we do apprehend, as a substance in which sensible qualities inhere. So that, deeply considered, the only reason for inferring the existence of Matter is *the necessity for some synthesis of attributes*.

Now, what did Berkeley? With very subtle perception of the difficulties of the problem, he boldly solved it by *making the synthesis a mental one*. Thus was matter wholly got rid of; it had no longer the excuse of being an inference.

The nature of human knowledge is the first object of his inquiry. "It is said that the faculties we have are few, and those designed by nature for the support and pleasure of life, and not to penetrate into the inward essence and constitution of things. Besides, the mind of man, being finite, when it treats of things which partake of infinity, it is not to be wondered at if it run into absurdities and contradictions, out of which it is impossible it should ever extricate itself, it being of the nature of infinite not to be comprehended by that which is finite."

This is plainly enough launched at Locke; but the worthy Bishop has no such disposition "to sit down in quiet ignorance." He suspects that "we may be too partial in placing the fault originally in our faculties, and not rather in the wrong use we make of them." He believes that God is too bountiful not to have placed knowledge within our reach, of which he has given us the desire. Berkeley here forgets the lesson man was taught in Paradise, where the Tree of Knowledge was placed within his reach, but the fruits thereof forbidden him. "Upon the whole," continues Berkeley, "I am inclined to think that the far greater part, if not all the difficulties which have hitherto amused philoso-

phers and blocked up the way to knowledge, are entirely owing to themselves. That we have first raised a dust, and then complain we cannot see."

The pretension on which all philosophy is founded is here openly proclaimed. The consequences of Locke's doctrine are rejected; the premises are retained. Berkeley's account of the origin of knowledge is the same as Locke's, only somewhat more explicitly defined. "It is evident to any one who takes a survey of the objects of human knowledge that they are either ideas actually imprinted on the senses, or else such as are perceived by attending to the passions and operations of the mind; or, lastly, ideas formed by help of memory and imagination, either compounding, dividing, or barely representing those originally perceived in the aforesaid ways."

Remark, firstly, that the *objects* of knowledge are said to be *ideas*. This has a paradoxical air to those unaccustomed to metaphysics, yet it is the simple expression of the facts of consciousness. All that the mind can be conversant about is obviously its ideas: we are conscious of nothing but the changes that take place in our minds. Whether these ideas are the *copies* or *representatives* of any *things*—whether changes in our state are to be attributed to any external *cause*: this is a question of philosophy, a question which common sense makes no scruple of begging. You see before you a flower, and you assume that an external thing resembling that flower exists, and that your sensation is produced by it, as a reflection in a mirror is produced by an object out of the mirror. But dive deeper into consciousness; interrogate yourself, and you will find that the comparison of the mirror is an assumption made only to *explain* the facts of consciousness, not given *in* those facts. Moreover, granting the assumption, you will then make the mind *immediately* conversant with its ideas *only*; for assuming that objects reflect themselves in the mirror, the mirror itself knows only the reflections: these it knows *immediately*; the objects it knows *mediately*, *i. e.* through the reflections. Thus is Berkeley keeping rigorously to

the facts of consciousness when he says that the "objects of knowledge are ideas."

Secondly, remark on Berkeley's use of the word *idea*, which stands both for sensation and *idea*. We cannot but regard this confusion of language as the cause of no little misapprehension of his doctrines. It is well therefore to warn the reader thereof. Now to consequences. "That neither our thoughts, nor passions, nor the ideas formed by our imagination, exist without the mind, is what everybody will allow; and to me it is no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (*that is, whatever objects they compose*), cannot exist otherwise than in a mind perceiving them. . . . The table I write on, I say exists, *i. e.* I see it and feel it, and if I were out of my study I should say it existed; meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it. As to what is said about the existence of unthinking things, without any relation to their being perceived, that is to me perfectly unintelligible. Their *esse* is *percipi*; nor is it possible they should have any existence out of the minds or thinking things which perceive them."

It is in this last paragraph that the kernel of his system lies. He had identified *objects* with *ideas*: having done so, it was easy to prove that objects could not exist without a perceiving mind *in* which to exist as ideas. "For what are the objects but the things which we perceive by sense?" Realism assents: objects are what we perceive. "And *what*, I pray you," continues Berkeley, "do we perceive besides our own ideas or sensations?" Realism hesitates; certainly the mirror has nothing immediately present to it, besides the reflections. "And is it not plainly repugnant," triumphantly continues Idealism, "that any one of these ideas, or any combination of them, should exist unperceived?" Realism has no answer to offer. It is in a dilemma from which there is apparently no escape.

The supposition of the existence of matter is founded on the

doctrine of *abstract ideas* (against which Berkeley wages war). "For can there be a nicer strain of abstraction than to distinguish the existence of sensible objects from their being perceived, so as to conceive them existing unperceived? Light and colors, heat and cold, extension and figures—in a word, *the things we see and feel*—what are they but so many sensations, notions, ideas, or impressions on the sense; *and is it not impossible to separate, even in thought, any of these from perception?* For my part, I might as easily divide a thing from itself. I may indeed divide in my thoughts, or conceive apart from each other, those things which perhaps I never perceived by sense so divided. Thus I imagine the trunk of the human body without the limbs, or conceive the smell of a rose without thinking of the rose itself. So far I will not deny that I can abstract, if that be properly called abstraction which extends only to the conceiving separately such objects as it is impossible may really exist, or be actually perceived asunder; but my conceiving or imagining power does not extend beyond the possibility of real existence or perception. Hence, as it is impossible for me to see or feel any thing without an actual sensation of that thing, so it is impossible for me to conceive in my thoughts any sensible thing or object distinct from the sensation or perception of it. In truth, the object and the sensation are the same thing, and cannot therefore be abstracted from one another. . . .

"In a word, all the choir of heaven and furniture of earth—all those bodies which compose the mighty frame of the world—have not any subsistence without a mind: their *esse* is to be perceived or known; and consequently, so long as they are not actually perceived by me, or do not exist in my mind, or that of any other created spirit, they must either have no existence at all, or else subsist *in the mind of some eternal spirit*. . . .

"Though we hold indeed the objects of sense to be nothing else but ideas which cannot exist unperceived, yet we may not hence conclude they have no existence except only while they are perceived by us, since there may be some other spirit that

perceives them, though we do not. Whenever bodies are said to have no existence without the mind, *I would not be understood to mean this or that particular mind, but all minds whatsoever.* It does not therefore follow that bodies are annihilated and created every moment, or exist not at all during the intervals between our perception of them. . . .

"I am content to put the whole upon this issue: if you can but conceive it possible for one extended movable substance, or in general for any one idea, or any thing like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause; I shall grant you its existence, though you cannot either give me a reason why you believe it exists, or assign any use to it when it is supposed to exist. I say the bare possibility of your opinion being true, shall pass for an argument that it is so.

"But, say you, surely there is nothing easier than for me to imagine trees in a park, or books in a closet, and nobody by to perceive them. I answer, you may so: there is no difficulty in it. But what is all this, I beseech you, more than *framing in your mind certain ideas* which you call books and trees, and at the same time *omitting to frame the idea of any one perceiving them?*

"But do not *you yourself perceive or think of them all the while?* This therefore is nothing to the purpose: it only shows you have the power of imagining or framing ideas in your mind, but it does not show that you can conceive it possible the objects of your thought may exist without the mind. To make out this, it is necessary that you conceive them existing unperceived or unthought of, which is a manifest repugnancy. When we do our utmost to conceive the existence of external bodies, we are *all the while only contemplating our own ideas.*"*

The last very remarkable passage must have been overlooked

* The foregoing passages are all taken from the *Principles of Human Knowledge*, sections 5, 6, 8, 22 and 23.

by the critic before mentioned, otherwise he would not have said that the "knot which Berkeley loosened, but which he certainly died not explicitly untie," was to be resolved, for the first time, by the arguments he there brings forward. Berkeley had untied the knot, explicitly, satisfactorily; and that too in the same way as his critic.*

The distinction between *primary* and *secondary* qualities, Berkeley easily refutes, and shows that the same arguments which make the secondary qualities to be only affections of the mind may be applied to the primary qualities.

Having battered down almost every objection, trivial or serious, that could be offered, Idealism iterates its fundamental principle:—All our knowledge of objects is a knowledge of ideas; objects and ideas are the same. *Ergo*, nothing exists but what is perceived.

Realism spies a loophole. These ideas, with which we admit the mind to be solely conversant, are but the ideas (images) of certain things: these things exist independently of being perceived, though their ideas cannot. Berkeley foresaw this also. "But, say you, though the ideas themselves do not exist without the mind, yet there may be things like them whereof they are copies or resemblances, which things exist without the mind in an unthinking substance. I answer, *an idea can be like nothing but an idea*; a color or figure can be like nothing but another color or figure. Again, I ask whether those supposed originals or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? If they are, then they are ideas, and we have gained our point; but if you say they are not, I appeal to any one whether it be sense to assert a color is like something which is invisible; hard or soft, like something which is intangible?" (Sect. 8.)

Realism is without a shadow of an answer. The philosophers are powerless against a theory so defended. No wonder that

* See the article in *Blackwood*, p. 817, *et seq.*

Idealism should have been pronounced irrefutable; the weapons were not forged, or, at any rate, were not in the armory of philosophy, which could successfully assail a fortress built on such a position. Dr. Reid's attempt we shall examine by and by.

As far as the simple facts of Consciousness extend, the analysis given by Berkeley is unimpeachable, unless we deny that Consciousness is *immediately* affected by sensations, and assert that it is *immediately* affected by external objects; but no metaphysician ever took up this position, for it would lead him to maintain that Consciousness is nothing but these very sensations, which are produced in the organism by the action of external influences; and this would be getting rid of the substratum Mind, in order to rescue the substratum Matter. No metaphysician therefore ever did or could, logically, object to Berkeley's fundamental position; but only tried to elude it, or make it open into other issues.

Given, however, the facts, there comes the question of inferences. It has been well said by Mr. Herbert Spencer that the denial of an external world "consists of a series of dependent propositions, no one of which possesses greater certainty than the single proposition to be disproved."* If the grounds of our belief in an external world are questionable, what better grounds have we for the belief that the external world is a mere subjective phenomenon?

We are to settle whether it is a more plausible hypothesis that ideas are proximately produced in us by the mere Will of the Creator, whose will is effectuated by certain laws; or whether the ideas are proximately produced in us by external objects, which exist quite independently of us. This question, remember, is one which admits of no proof. It is not a question of fact, but of plausibility. It is not to be decided by common sense, but by analogical reasoning. Our *knowledge* extends no further than our *ideas*. Our *inferences* can be nothing more than inferences.

* *Principles of Psychology*, p. 36.

Berkeley has far better reasons for his inference than his critics imagine. He could not see the force of the argument which made Matter a necessary postulate. That we *could* have sensations and ideas without the presence of objects, is manifest from the fact that we *do* often have them so, in dreams and frenzies. If, therefore, matter is not always necessary for the production of ideas—if ideas can be sometimes produced without the presence of external objects—the pretended necessity, which alone forms the argument for the existence of matter, is done away with.

"But though," he says, "we might possibly have all our sensations without bodies, yet perhaps it may be thought easier to conceive and explain the manner of their production by supposing external bodies in their likeness rather than otherwise, and so it might at least be probable there are such things as bodies that excite ideas in our minds. But neither can this be said, for though we give the Materialists their external bodies, they, by their own confession, are never nearer the knowing how our ideas are produced, since they own themselves unable to comprehend in *what manner body can act upon spirit*, or how it is possible it should imprint an idea in the mind."

We have here the difficulty stated, which most Dualists (those who maintain the existence of spirit and matter, as distinct substances) have not been sufficiently alive to; and one which gave rise to Leibnitz's theory of pre-established harmony, and to Malebranche's theory of our seeing all things in God. This difficulty is indeed insuperable. It is easy to talk of the spirit being a mirror in which the universe reflects itself. Try for an instant to imagine a substance, such as matter, reflecting itself in, or acting upon, another substance having no one property in common with it. You cannot. Nor is this all: you cannot even imagine two substances so distinct as matter and spirit are defined to be.

Berkeley then is right in triumphing over Realism and Dualism. Right in saying, that if he were to accord them the existence of matter, they could make no use of it. The subject would

remain as dark as before: matter throws no light on it. He maintains that our ideas are produced in us in conformity with the laws of Nature. These laws have been ordained by God. To suppose that matter is the mere occasional cause—the *vehicle through which the laws of Nature operate*—is gratuitous. The agency of the Creator is more simple and direct. He had no need of creating first laws, and afterwards matter, through which these laws should come into effect. He created the laws alone; they act upon us as they were destined to act, and without the superfluous aid of matter, which is a mere go-between.

Now, as an inference—as a scientific hypothesis—few thoroughly acquainted with the question, and with the data on which it was founded, can, we think, deny that this of Berkeley is many degrees superior to the hypothesis of Dualism. While philosophers teach that there are two distinct eternal substances, which they name Spirit and Matter, Berkeley teaches that there is only *one* substance, viz. *Spirit*. With this one substance he can construct the world. According, therefore, to the fundamental rule in philosophy, that “Entities or existences are not to be multiplied unless upon necessity” (*entia non sunt multiplicanda præter necessitatem*), the introduction of a second substance, viz. matter, is superfluous, or worse. Of the existence of matter we have no proof whatever: it is a mere inference; it is inferred, in order to explain the phenomena: and what phenomena? those of perception—*i. e.* the phenomena of the thinking substance.

If, then, Berkeley is more rigorous in his analysis of facts, and more ingenious and plausible in his hypothesis, than his antagonists suppose, shall we pronounce his Idealism satisfactory and true?

Hume said of it, that it admitted of no answer, but produced no conviction. And we have met with no final refutation of it. Yet, inasmuch as it is the irresistible belief of mankind that objects are not dependent either upon our perception of them, or upon the perception of any other mind, for their existence—that

objects exist *per se*, and would continue to exist if all minds were annihilated—Berkeley's theory never can produce conviction. Reid, therefore, was right in standing by this universal and irresistible belief. He was egregiously wrong, however, in supposing that he answered Berkeley by an appeal to this irresistible belief. It does not follow that a belief which is irresistible must be true. This maxim, so loudly proclaimed by the Scotch school,* is refuted by several well-known facts in philosophy. Thus—to take the most striking example—the belief that the sun revolved round the earth, was for many centuries irresistible, and false. Why may not Berkeley have been a metaphysical Copernicus, who, by rigorous demonstration, proved the believe of mankind in the existence of matter to be irresistible and false? Reid has no answer to give. He can merely say, "I side with the vulgar;" but he might have given the same answer to Copernicus. Many illustrious men (Bacon among them) ridiculed the Copernican theory; but all the dogmatism, ridicule, and common sense in the world could not affect that theory. Why, we repeat, may not Berkeley have been a metaphysical Copernicus?

To prove that he was not, you must prove his reasoning defective; to prove this, you must show wherein his error lies, and not wherein his theory is at variance with your belief. All that your irresistible belief amounts to, is that of a strong, a very strong, presumption against the truth of that which opposes it. Reid, in accepting this presumption as a proof, was in the right so long as Berkeley's reasoning was not strong enough to over-

* Especially by Dr. Brown, who says that the "skeptical argument for the non-existence of an external world, as a mere play of reasoning, admits of no reply." The only reply he makes is, that the belief is irresistible. Hume had already admitted that the belief was irresistible; the whole scope of his philosophy was to prove it both irresistible and *false*. How absurd, then, to appeal to the belief! Kant truly observes, in the Preface to his *Kritik*, "Admitting Idealism to be as dangerous as it really is, it would still remain a shame to philosophy and reason to be forced to ground the existence of an external world on the (mere) evidence of belief." The more so as the fact of belief had never been questioned. The question was, Is the belief well grounded?

come it; but singularly wrong in supposing that the presumption was a refutation.

Berkeley's main position is, that the *objects of knowledge are ideas, and nothing but ideas*. The position is incontrovertible. The conclusion therefore, *all human knowledge can only be the knowledge of ideas, and of nothing but ideas*, is equally incontestable. Not less so the second conclusion: *objects being identified with ideas, and we having no idea of an object but as it is perceived, the ESSE of objects to us is PERCIPI*.

In admitting all this, what do we admit? Simply that human knowledge is not the "measure of all things." Objects *to us* can never be more than ideas; but are *we* the final measure of all existence? It was the dogma of the Sophist that Man is the measure of all things. It should not be the dogma of the sober thinker. Because we can only *know* objects as ideas, is it a proper conclusion that objects only *exist* as ideas? For this conclusion to be rigorous, we must have some proof of our knowledge being the absolute standard of truth, instead of the standard of the relation things bear to our intellect.

The Idealist will say, "If you cannot *know* any thing beyond your ideas, why do you infer that there *is* any thing?—A question not easily answered. He will moreover say, "I defy you to conceive any thing existing unperceived. Attempt to imagine the existence of matter when mind is absent. You cannot, for in the very act of imagining it, you include an *ideal percipient*. The trees and mountains you imagine to exist away from any perceiving mind, what are they but the very ideas of *your* mind, which you transport to some place where you are not? In fact, to separate existence from perception is radically impossible. It is God's synthesis, and man cannot undo it."*

To this we answer, it is very true that, inasmuch as our knowledge of objects is identical with our ideas, we can never, by any

* See this argued in a masterly manner by the critic in *Blackwood* before quoted.

freak of thought, imagine an object *apart from the conditions under which we know it*. We are forced by the laws of our nature to invest objects with the forms in which we perceive them.* We cannot therefore conceive any thing which has not been subject to the laws of our nature, because in the very act of conception those laws come into play. But is it not a very different proposition to say, "I cannot conceive things otherwise than according to the laws of my nature," and to say, "I cannot conceive things otherwise, *consequently* they cannot exist otherwise?" The Idealist here assumes that knowledge is absolute, not relative—that man is the measure of all things.

Perception is the *identity* (in the metaphysical sense of the word) of the ego and the non-ego—the *tertium quid* of two united forces; as water is the identity of oxygen and hydrogen. The ego can never have any knowledge of the non-ego, in which it (the ego) is not indissolubly bound up; as oxygen never can unite with hydrogen to form water, without merging itself and the hydrogen in a *tertium quid*. Let us suppose the oxygen endowed with a consciousness of its changes. It would attribute the change *not* to hydrogen, which is necessarily hidden from it, *but to water*, the only form under which hydrogen is known to it. In its consciousness it would find the state named water (perception), which would be very unlike its own state (the ego); and it would suppose that this state, so unlike its own, was a representation of that which caused it. We say then, that although the hydrogen can only exist for the oxygen (in the above case) in the identity of both as water, this is no proof that hydrogen

* "When in perception," says Schelling, "I represent an object, *object and representation are one and the same*. And simply in this our inability to discriminate the object from the representation during the act, lies the conviction which the common sense of mankind has of the reality of external things, although these become known to it only through the representations." (*Ideen zu einer Philos. der Natur, Einleitung*, p. xix., quoted by Sir W. Hamilton.) This is indisputable, but it is only saying that our knowledge of things is subject to the conditions of knowledge. Because *we* cannot discriminate between the object and the representation, it is no proof that there is no distinction between them.

does not exist under some other relations to *other* forces. In like manner, although the non-ego cannot exist in relation to mind otherwise than in the identity of the two (perception); this is no sort of proof that it does not exist in relation to other beings under quite different conditions.

In conclusion, we admit, with the Idealists, that all our *knowledge* of objects consists in our ideas. But we cannot admit that all existence is limited by our knowledge, merely on the ground that when we would conceive any thing existing, we are forced to conceive it in accordance with the laws of our conceptive faculties. We admit, with the Idealists, that all our knowledge is *subjective*. But we do not admit that what is true subjectively, is true objectively. We believe in the existence of an external world quite independent of any percipient; not because such is the obvious and universal belief, but because the arguments by which Idealism would controvert it are vitiated by the assumption of knowledge being a criterion of all existences. Idealism agrees with Realism in placing reliance on the evidence of sense; it argues however that inasmuch as our *knowledge* is confined to ideas, we have no right to assume any thing beyond ideas. Yet it also is forced to assume something as the cause of ideas: this cause it calls the Will of the Creator; and this is an assumption. The real dispute therefore should be concentrated on this point: Which assumption is more consonant with our irresistible belief, —the assumption of an external matter *unlike* our sensations, yet the cause of them; or the assumption of a providential scheme, in which our sensations are the effects of the operation of Divine laws, and in which matter plays no part? The answer cannot be dubious. The former assumption, as more consonant with universal belief, must be accepted.

Berkeley, we believe, failed as a metaphysical Copernicus, because the assumption which he opposed to the universal belief was less consonant with that belief than the assumption it was meant to replace. Had Copernicus not started an hypothesis which, however contradictory to the senses, nevertheless afforded

a much better explanation of celestial phenomena than was possible on the old hypothesis, he would not have been listened to. Berkeley's assumption, if conceded, carries him no deeper than the old assumption. Idealism explains nothing. To accept it would be to renounce a universal belief for a mere hypothesis. But that Berkeley was a deep and remarkable thinker must be readily conceded; and he failed, as the greatest Philosophers of all times have failed, not because he was weak, but because Philosophy was impossible.

Those who have followed the course of this History with attention to its *moral* (so to speak) will not fail to observe how Berkeley's Idealism is at bottom but the much decried system of Spinoza, who taught that there was but one essence in the universe, and that one was Substance. Berkeley also taught that there was but one, and that one was Thought. Now call this One what you will, the result is the same: speculatively or practically. You may have certain degrading associations attached to the idea of substance; or certain exalted associations attached to that of spirit. But what difference can your associations make with respect to the real nature of things?

One great result of Berkeley's labors was the lesson he taught of the vanity of ontological speculations. He paved the way to that skepticism which, gulf-like, yawns as the terminal road of all consistent Metaphysics.

FIFTH EPOCH.

THE ARGUMENTS OF IDEALISM CARRIED OUT INTO SKEPTICISM.

CHAPTER I.

HUME.

§ I. LIFE OF HUME.

MR. BURTON'S ample and excellent biography* would furnish us with materials for a pleasant memoir, could we here afford the requisite space; but we must content ourselves with referring the reader to that work, and with merely recording the principal dates and events of an uneventful life.

David Hume was born at Edinburgh, 26th April, 1711; the youngest child of a poor laird of good blood. He was an orphan before his education was completed. His guardians first thought of the profession of law, but, owing to his repugnance, he was absolved from that career, and was placed in a Bristol counting-house, where he did not remain long. On coming of age he found himself in possession of a small property, too small for honorable subsistence in England, but large enough for France, and to Rheims he went; from thence to La Flèche, where the Jesuits' college and library were great attractions to the studious youth; and there he passed several years in solitary study.

* *The Life and Correspondence of David Hume, from the Papers bequeathed to the Royal Society of Edinburgh.* By John Hill Burton. 2 vols.

A great ambition moved him : he was to accomplish for moral science a revolution analogous to that which Bacon had effected in physical science. His *Treatise on Human Nature*, which appeared in 1737, and which fell still-born from the press, was announced as an attempt to introduce the experimental method into reasonings on moral science. We need scarcely point out the profound misconception of the Experimental Method here implied ; nor is it necessary to show at any length that there was no novelty whatever in Hume's attempt to test psychology by experience.

In 1741 appeared the first part of his immortal *Essays* ; and in 1747 he accompanied General St. Clair, as secretary, in the embassy to Vienna and Turin. In 1752 he published his *Political Discourses* and the *Inquiry concerning the Principles of Morals*. The appointment of Librarian to the Faculty of Advocates in Edinburgh—the salary of which he generously gave to the poor poet Blacklock—placed at his disposal a fine collection of books ; and this suggested the undertaking which has long been held his greatest title to fame—the *History of England*, the first volume of which appeared in 1754.

For the literary historian there are two piquant episodes in the life of Hume. The first is the ovation given to the philosopher in Paris, whither he had accompanied the Marquis of Hertford ; the second is his friendship and quarrel with Rousseau. We cannot pause to dwell on either.

Hume died in the spring of 1776, leaving a name imperishable in our literature, although it is a name attached to opinions which have roused, and will continue to rouse, the most vehement opposition. It should never be forgotten, moreover, that, in spite of Hume's opinions, so wise and good a man as Adam Smith could publicly write of him, "Upon the whole, I have always considered him, both during his lifetime and since his death, as approaching as nearly to the idea of a perfectly wise and virtuous man, as perhaps the nature of human frailty will permit."

§ II. HUME'S SKEPTICISM.

The marvellous acuteness and subtlety of Hume have never been denied; and his influence upon speculation has been aided as much by the alarm his doctrines excited, as by the ingenuity with which they were upheld. If Berkeley met with no refuters, Hume could meet with none. Antagonists have generally been compelled to admit that the skeptical reasoning was unanswerable.

Locke had shown that all our knowledge was dependent upon experience. Berkeley had shown that we had *no* experience of an external world independent of perception; nor could we have any such experience. He pronounced matter to be a figment. Hume took up the line where Berkeley had cast it, and flung it once more into the deep sea, endeavoring to fathom the mysteries of being. Probing deeper in the direction Berkeley had taken, he found that not only was Matter a figment, Mind was a figment also. If the occult substratum, which men had inferred to explain material phenomena, could be denied, because not founded on experience; so also, said Hume, must we deny the occult substratum (mind) which men have inferred to explain mental phenomena. All that we have any experience of, is impressions and ideas. The substance *of* which these are supposed to be impressions, is occult—is a mere inference; the substance *in* which these impressions are supposed to be, is equally occult—is a mere inference. Matter is but a collection of impressions. Mind is but a succession of impressions and ideas.*

Thus was Berkeley's dogmatic Idealism converted into Skepticism. Hume, speaking of Berkeley, says, "Most of the writings of that very ingenious philosopher form the best lessons of skepticism which are to be found either among the ancient or

* Locke had already shown that we are as ignorant of spirit as of substance. We know mind only in its *manifestation*; we cannot know it *per se* as a *substratum*. Hume's argument therefore had a firm foundation in philosophy. He only concluded from admitted premises.

modern philosophers, Bayle not excepted. He professes, however, in his title-page (and undoubtedly with great truth) to have composed his book against the Sceptics, as well as against the Atheists and Free-thinkers. But that all his arguments, though otherwise intended, are in reality merely skeptical, appears from this, that they admit of no answer, and produce no conviction."

Remark, also, that Hume's skepticism, though it reduces philosophy to a singular dilemma, viz. that of either refuting the skeptical arguments, or of declaring itself and its pretensions to be vain and baseless, nevertheless affects in no other way the ordinary judgments or actions of mankind. Much stupid ridicule and frivolous objection have been, and probably will continue to be, brought against Hume. Reid, from whom one might have expected something better, is surprised at Hume's pretending to construct a science upon human nature, "when the intention of the whole work is to show that there is neither human nature nor science in the world. It may, perhaps, be unreasonable to complain of this conduct in an author who neither believes his own existence nor that of his reader; and therefore could not mean to disappoint him, or laugh at his credulity. Yet I cannot imagine that the author of the *Treatise on Human Nature* is so skeptical as to plead this apology. He believed, against his principles, that he should be read, and that he should retain his personal identity, till he reaped the honor and reputation justly due to his metaphysical acumen." He continues further in this strain, dragging in the old error about Pyrrho having inconsistently been roused to anger by his cook, "who probably had not roasted his dinner to his mind," and compares this forgetfulness to Hume's every "now and then relapsing into the faith of the vulgar."*

If this was meant for banter, it was very poor banter; if for argument, it was pitiable. But if such arguments appeared

* *Inquiry*, Introd. i. § 5.

valid to a thinker of Reid's reputation, it is reasonable to suppose that inferior men may also receive them as conclusive. Hume shall, therefore, be allowed to speak for himself; and he shall speak in the language of that very *Treatise on Human Nature* to which Reid alludes:

"Should it be here asked me whether I sincerely assent to this argument which I seem to take such pains to inculcate, and whether I be really one of those skeptics who hold that all is uncertain, and that our judgment is not in *any* thing possessed of *any* measures of truth and falsehood, I should reply that this question is entirely superfluous, and that neither I nor any other person was ever sincerely and constantly of that opinion. Nature, by an absolute and uncontrollable necessity, has determined us to judge as well as to breathe and feel; nor can we any more forbear viewing certain objects in a stronger and fuller light upon account of their customary connection with a present impression, than we can hinder ourselves from thinking as long as we are awake, or seeing the surrounding bodies when we turn our eyes towards them in broad sunshine. Whoever has taken the pains to refute the cavils of this *total* skepticism, has really disputed without an antagonist, and endeavored by arguments to establish a faculty which *Nature has antecedently implanted in the mind and rendered unavoidable*.

"My intention, then, in displaying so carefully the arguments of that fantastic sect, is only to make the Reader sensible of the truth of my hypothesis, that all our reasonings concerning causes and effects, are derived from nothing but custom; and that belief is more properly an act of the sensitive than of the cogitative part of our natures. . . . If belief were a simple act of the thought, without any peculiar manner of conception, or the addition of force and vivacity, it must infallibly destroy itself, and in every case terminate in a total suspense of judgment. But as experience will sufficiently convince any one, that although he finds no error in my arguments, yet he still continues to believe and think and reason as usual, he may safely conclude that his

reasoning and belief is some sensation or peculiar manner of conception, which 'tis impossible for mere ideas and reflections to destroy."*

It has always struck us as an illustration of the great want of candor displayed by Hume's opponents, that they never quoted this very significant and explicit passage; indeed, we never remember to have seen the passage quoted by any one. Let us ask, what does the foregoing declaration amount to, if not to the boasted "common-sense view," that our belief in the existence of matter is instinctive, fundamental? Does not Dr. Brown's admission that the skeptical argument is unanswerable as a mere play of reasoning, concede all that Hume requires? Does not Dr. Brown's conclusion, that we are thrown upon "irresistible belief" as our only refuge against skepticism, equally accord with Hume's explicit declaration that we *do* believe and cannot help believing, though we can give no reason for the belief?

"Thus the skeptic," Hume adds a little further on, "still continues to reason and believe, even though he asserts that he cannot defend his reason by reason; and by the same rule he must assent to the principle concerning the existence of body, though he cannot pretend by any arguments of philosophy to maintain its veracity. *Nature has not left this to his choice*, and has doubtless esteemed it an affair of too great importance to be trusted to our uncertain reasonings and speculations. We may well ask, *what causes induce us to believe in the existence of body?* but 'tis in vain to ask *whether there be body or not?* that is a point which we must take for granted in all our reasonings."

After this let no more be said about Hume's practical inconsequences. Locke before him had clearly enough seen and signalized the impotence of the attempt to penetrate beyond phenomena, and had, with his usual calm wisdom, counselled men to "sit down in quiet ignorance." He knew the task was hopeless; he knew, also, that it was trivial. God has given us the means

* *Human Nature*, part iv. § i. p. 250.

of knowing all that directly concerns us, a certainty which suffices for all our wants. With that, reasonable men will be content. If they seek more, they seek the impossible; if they push their speculations deeper, they end in skepticism. It was the philosophical *mission* of Hume (to adopt a phrase in vogue) to show how inevitably all such speculations, if consistent, ended in skepticism.

"Men," he says, "are carried by a natural instinct or prepossession to repose faith in their senses. When they follow this blind and powerful instinct of nature, they always suppose the *very images* presented to the senses to be the external objects, and *never entertain any suspicion that the one are nothing but representatives of the other*. But this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us that nothing can ever be present to the mind but an *image or perception*. So far, then, we are necessitated by reasoning to contradict the *primary instincts of Nature*, and to embrace a new system with regard to the evidence of our senses. But here philosophy finds herself extremely embarrassed, when she would obviate the cavils and objections of the skeptics. She can no longer plead the infallible and irresistible instinct of nature, for that led us to quite a different system, which is acknowledged fallible, and even erroneous; and to justify this pretended philosophical system by a chain of clear and convincing argument, or even any appearance of argument, exceeds the power of all human capacity.

"Do you follow the instinct and propensities of nature in assenting to the veracity of the senses? But these lead you to believe that the *very perception or sensible image is the external object*—(Idealism).

"Do you disclaim this principle in order to embrace a more rational opinion, that the perceptions are only *representations* of something external? You here depart from your natural propensities and more obvious sentiments; and yet are not able to satisfy your reason, which can never find any convincing argu-

ment from experience to prove that the perceptions are connected with external objects"—(Skepticism).

This is the dilemma to which Philosophy is reduced : out of it there is no escape ; and Hume deserves the gratitude of mankind for having brought philosophy to this pass. Mankind, however, has paid him with reprobation. As the whole course of this History has been occupied in tracing the inevitable result of all Philosophy to be precisely this much abused skepticism, our readers will be prepared for a different appreciation of Hume. Let us, therefore, endeavor to define the nature of this skepticism, which has caused such great alarm. Skepticism, meaning doubt, and being frequently used to signify religious doubt, has alarming associations attached to it. To call a man a skeptic is to call him a heretic. And, unfortunately for Hume's philosophical reputation, he was a skeptic in religion as well as in philosophy, and mankind have consequently identified the former with the latter.

Now, philosophical skepticism can only mean a doubt as to the possibility of Philosophy ;—in other words, a doubt only on one particular subject. If I accept the consequences to which the doctrine of Hume leads me, am I forced to suspend my judgment, and to pronounce *all* subjects uncertain ? or am I only to pronounce *some* subjects uncertain ? The latter is clearly the only opinion I can entertain. *What* then are the questions on which I must be content to remain in darkness ? ' Locke, no less than Hume, has told us : All which relate to Philosophy—which pretend to discuss the nature and essences of things.

This skepticism, the reader must acknowledge, has nothing very alarming in it, except to Philosophy. It is maintained by the vast majority of thinking men—some from conviction, others from a vague sense of the futility of ontological speculation. Only the bad passions roused in discussion could pretend to confound it with heresy. This Skepticism indicates the boundaries of inquiry. It leads us from impossible attempts to fly, to instruct us how securely we may run. It destroys Philosophy

only to direct all our energies towards positive Science. In the words of Goethe, "Let us not attempt to demonstrate what cannot be demonstrated! Sooner or later we shall otherwise make our miserable deficiencies more glaring to posterity by our so-called works of knowledge."

Hume was a skeptic; and, consequently, early in life ceased devoting his marvellous acuteness to any of the questions agitated in the schools. His *Essays* and his *History* were excellent products of this change of direction; and although he did devote a portion of the *Essays* to philosophy, yet it was but a portion, and one which gave a more popular and elegant exposition of the principles of his first work.

§ III. HUME'S THEORY OF CAUSATION.

It is customary to speak of "Hume's theory of Causation," and to bestow no inconsiderable acrimony upon him on its account. But, in the first place, the theory is not peculiarly his; in the second place, his application of it to the question of Miracles, which has excited so much vehement controversy, reduces itself to "this very plain and harmless proposition, that whatever is contradictory to a complete induction is incredible. That such a maxim as this should be either accounted a dangerous heresy, or mistaken for a recondite truth, speaks ill for the state of philosophical speculation on such subjects."*

The theory may be thus briefly stated. All our *experience* of causation is simply that of a constant succession. An antecedent followed by a sequent—one event followed by another: this is all that we experience. We attribute indeed to the antecedent, a *power* of producing or causing the sequent; but we can have no experience of such a power. If we believe that the fire which has burned us will burn us again, we believe this from habit or custom; not from having perceived any *power* in the

* Mill's *System of Logic*, vol. ii. p. 183.

fire. We believe the future will resemble the past, because custom has taught us to rely upon such a resemblance. "When we look about us towards external objects, and consider the operation of causes, we are never able in a single instance to discover any power or necessary connection—any quality which binds the effect to the cause, and renders the one an infallible consequence to the other. We only find that the one does actually in fact follow the other. The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the outward senses. The mind feels no sentiment or inward impression from this succession of objects; consequently there is not, in any single instance of cause and effect, any thing which can suggest the idea of power or necessary connection."* This is the whole of his theory. His explanation of our belief in power, or necessary connection, is that it is a matter of habit.

I know not whether Hume ever read Glanvill's *Scepsis Scientifica*. The title was one to attract him. At any rate, Glanvill had clearly enough stated Hume's theory, *e. g.* "All knowledge of causes is deductive; for we know of none by simple intuition, but through the mediation of their effects. So that we cannot conclude any thing to be the cause of another *but from its continually accompanying it*; for the *causality* itself is *insensible*." Malebranche had also anticipated it; and so had Hobbes. The language indeed of the latter is so similar to the language employed by Hume, that I agree with Dugald Stewart in believing Hume to have borrowed it from Hobbes. "What we call experience," says Hobbes, "is nothing else but remembrance of what antecedents have been followed by what consequents. . . . No man can have in his mind a conception of the future, for the future is not yet; but of our conceptions of the past we make a future, or rather call past future relatively. Thus, after a man has been accustomed to see like antecedents followed by like consequents, whensoever he seeth the like come to pass to any

* *Essays*, sect. vii.

thing he had seen before, he looks there shall follow it the same that followed then."

This theory of Causation has been hotly debated, partly because of the "consequences" which some have seen, with alarm, to be deducible from it (for opinions are judged of more by their supposed consequences than by their presumed truth); partly also because Hume has not stated it with the clearness which prevents misunderstanding. It is only to the latter point we can here attend.

When Hume asserts that experience gives no intimation of any *connection* between two events, but only of their invariable *conjunction*,—when he says that the mind cannot perceive a causal nexus, but only an invariableness of antecedence and sequence, he is contradicted, or seems to be, by the consciousness of his readers. They declare that, over and above the fact of sequence, there is always an intimation of *power* given in every causation, and this it is which distinguishes causal from casual sequence,—connection from mere conjunction. The fire burns paper because there is some power in the fire to effect this change. Mere antecedence, even if invariable, cannot be sufficient, or else day would be the cause of night, the flash of lightning would be the cause of the thunder-peal. Swallows fly close to the earth some little while before the rain falls; but no one supposes the flight of the swallows causes the fall of the rain. In every case of causation there must be an element of power—a capacity of producing the observed change—a nexus of some kind, over and above the mere juxtaposition of bodies. If diamond will cut glass, it has a power to do so; the sharpest knife is without this power.

So reason Hume's antagonists. Nor do I think they are finally answered by resolving the idea of power into mere invariableness of antecedent and sequent; for they may reply that the "invariableness" itself is deduced from the idea of power; we believe the fire will invariably burn the paper because it has the power to do so, because there is a real nexus between fire and

the combustion of paper ; only on such a belief can our expectation of the future resembling the past be securely founded.

The ordinary belief of mankind in the existence of something more than mere antecedence and consequence, is therefore a fact. This fact Hume and others omit. Because they cannot perceive the power, they declare that we have no belief in it. Hume insists upon the impossibility of our perceiving power—of our perceiving any necessary connection between two events. But, say those who oppose this theory, “ Although we cannot *perceive* the power, we are forced to *believe* in it ; and this belief is not a matter of custom, but is given in the very facts of consciousness. We perceive that *some power* is at work producing effects ; the *precise nature* of this power, indeed, we cannot perceive, because we never can know things *per se*. When a spark ignites gunpowder, we perceive a power in the spark to ignite gunpowder : *what* that power is, we know not ; we only know its effects. But our ignorance is equally great of the gunpowder : *what* it is we know not ; we only know its appearances to us. It might as well be said that we believe in the gunpowder from custom (since we really know nothing of it *per se*), as that we believe in the power of the spark to ignite gunpowder from custom, since we really know nothing of power *per se*. We know nothing *per se*.”

I have marshalled the arguments, with as much force as I could muster, into so small a field, in order to bring into appreciable distinctness the source of the opposition to Hume’s theory on the part of many who have no doctrinal distrust towards it. Before attempting an elucidation of the difficulty, it will be needful to consider the grounds of our belief in causation. As it is a fact that all men believe in some power involved in every causal act, we have to ask, Is that belief well founded ?

Two schools at once present themselves. The one (that of Hume) declares that the belief has no good grounds ; it is a matter of custom. If I believe the sun will rise to-morrow, it is because it has always risen. If I believe that fire will burn in

future, it is because it has always burned. From habit I expect the future will resemble the past: I have no proof of it.

The other school declares that this belief in causation "is an intuitive conviction that the future will resemble the past." This is the language of Reid and Stewart. Dr. Whewell would have us admit the belief as a fundamental idea—a necessary truth independent of and superior to all experience.

Both explanations we take to be very incompetent. Custom or habit can essentially have nothing whatever to do with it, because our belief is as strong from a single instance as from a thousand. "When many uniform instances appear," says Hume, "and the same object is always followed by the same event, *we then begin to entertain* the notion of cause and connection. We then feel a new sentiment, to wit, *a customary connection* in the thought between one object and its usual attendant; and this sentiment is the original of that idea which we seek for." This is manifestly wrong. A single instance of one billiard-ball moving another, suffices to originate the "sentiment," without further repetition. Nor is there more truth in the assertion that the belief depends on "conviction of the future resembling the past;" this explanation assumes that the general idea precedes the particular idea. If we believe that similar effects will follow whenever the same causes are in operation—if we believe that fire will burn, or that the sun will rise to-morrow—we are simply *believing in our experience*, and nothing more. We cannot help believing in our experience; that is irresistible: but in this belief, the idea of either past or future does not enter. I do not believe that fire will burn because I believe that the future will resemble the past, but simply because my experience of fire is that it burns—that it has the power to burn. Take a simple illustration, trivial, if you will, but illustrative:—A child is presented with a bit of sugar: the sugar is white, of a certain shape, and is solid; his experience of the sugar is confined to these properties: he puts it in his mouth; it is sweet, pleasant: his experience is extended; the sugar he now believes (knows) to be sweet and pleasant,

as well as white and solid.* Thus far experience is not transcended. Some days later, another piece of sugar is given him. Is it now necessary for him to have any "intuitive conviction that the future will resemble the past"—any fundamental idea independent of experience—to make him believe that if he puts the sugar in his mouth it will taste sweet? Not in the least: he believes it is sweet, because he knows it is sweet—because his experience of sugar is that it is sweet. By no effort could he divest himself of the idea of its sweetness, because sweetness forms an integral part of his idea of the sugar. So we may say of the sun's rising: it is part and parcel of our idea of the sun. So of one billiard-ball putting a second in motion: our experience of billiard-balls is that they put each other in motion.

Custom has primarily nothing to do with the belief. If we had only one experience of fire—if we saw it only once applied to a combustible substance—we should believe that it would burn, because our idea of fire would be the idea of a thing which burns. Custom has however, secondarily, some influence in correcting the tendency to attribute properties to things. Thus, a child sees a friend who gives him an apple. The next time the friend comes he is asked for an apple, because the idea of this friend is of a man who, amongst other properties, has that of giving apples. No apple is given, and this idea is destroyed. Similarly, when all our experience of things is confirmatory of our *first* experience, we may say that habit or custom induces us to attribute certain effects to certain causes. When our subsequent experience contradicts our first experience, we cease to attribute those effects to those causes which we first experienced;

* It will perhaps seem strange that we should select sweetness as an example of causation. We selected it for its simplicity. No one will deny that the taste of sweetness is as much an effect caused by the sugar as pain is an effect caused by fire. But people are apt to overlook that causation is the result of the properties of one body acting upon the properties of another. They would call sweetness a quality in sugar: but the motion of a billiard-ball they say is *caused* by another ball.

this is only saying that our subsequent experience has destroyed or altered the idea we formed at first.

Remark how much confusion is spread over this subject by the inconsiderate introduction of the word belief. It is incorrect to say that a man *believes* that fire will burn him if he puts his finger in it; he *knows* it. He will believe that it has burned some one else—he will believe in a *proposition* you make about fire, because belief is the assent to propositions: but to talk of his believing that sugar will be sweet, when he knows it *is* sweet, when he cannot think of it otherwise than as sweet; or that fire will burn when he knows it burns, is as improper as to say that he *believes* himself cold when he *is* cold.

Only from this improper use of the word belief could the theory of fundamental ideas, or of “an intuitive conviction that the future will resemble the past,” have stood its ground for a moment. If the proposition “Fire will burn paper” were put to any one, he would unquestionably believe it, because he has no other knowledge of the fire under those circumstances. The proposition is as evident to him as that two and two make four. Although, therefore, he may be said to believe in the proposition, “Fire will burn paper,” he cannot properly be said to act upon belief when he attempts to light paper: he acts upon his knowledge. Metaphysicians argue as if the belief in the immediate result of an action were a belief in some *implied proposition* about the course of nature. It is really a reliance upon experience; nothing more.

It is necessary to distinguish between belief in existence, and belief in propositions. It is inaccurate to say a man *believes* in his own existence, as if that were similar to his belief in a proposition. But though a man cannot believe in his own existence, simply because it is impossible for him to conceive himself as non-existent, he may believe that he will exist eternally, because that is a proposition, the converse of which is conceivable and maintainable.

The primordial act of all thinking whatever, is, as I have ex

plained in the Introduction to this History, the making *present* to the mind of what is *absent* from the sense; and this, which connects all intellectual phenomena into one class, renders the accurate demarcation of them sometimes impossible, so insensibly does the one pass into the other. Thus when I say, "I see it has rained," because the wet streets make me infer that the wetness was caused by rain, my assertion is grounded on a mental re-presentation of the absent occurrence, precisely analogous to that which takes place when I *infer* the sweetness of the sugar before me, or *perceive* that the flower in Julia's hair is a rose, or *believe* that the paper she holds close to the candle will infallibly ignite if paper and flame come in contact. In each case the inference, perception, or belief, is the re-presentation of facts formerly present in my experience of rain, sugar, roses, and candles. Whenever I forget any of the attendant facts, *i. e.* fail to make them present, I can only form an incomplete conception of the thing about which I reason, or infer. Bad logic is imperfect re-presentation. In proportion to the complexity of a proposition will be the liability to error, because of the liability to suffer some of the attendant facts to drop out of sight. Thus the proposition "Fire will burn paper" is so simple, and accordant with daily experience, that assent to it is instantaneous; but the proposition "Human life may extend over two centuries" is one implying so many facts which cannot be made present to the mind, because not lying within familiar experience, that instead of assent it produces denial, or at least doubt, which is suspension of belief, which again is the confessed inability to make all the facts present to the mind. That "two and two make four" is the immediate and irresistible conclusion of every educated man; nevertheless, this very man would pause before assenting to the proposition "Eight times three hundred and ninety-six, make three thousand one hundred and sixty-eight," because he would have to make present to his mind the successive steps of the calculation, and this would demand an effort, great in proportion to his want of familiarity with calculations.

In spite of this identity of belief and perception, it is necessary for the perspicuity of discussion to discriminate the two, and I propose therefore to restrict the term belief to the assent to propositions, and demarcate it from those direct inferences which are made in the presence of objects and have reference to them. I would say, we believe in the proposition "Fire burns," but know the fact that the paper about to be thrust into flame will ignite. Such a discrimination of terms will be found useful in discussing causation. We shall thus see in what respect assent to a proposition, complex in its elements, differs from the "practical belief" of mankind in particular facts—we shall separate the belief of the philosopher in the proposition "Every effect must have a cause," from the belief of the child that the fire, which yesterday burned paper, will burn it to-day. Both beliefs are grounded on and limited by experience; but the experience of the philosopher is distinguished from that of the child by its greater accumulation of analogous facts. The "necessity" and "universality" which, according to Kant and Dr. Whewell, distinguish the philosophical conception, and raise it above experience, will be considered hereafter. For the present it is enough if we have reduced belief in causation (or in power) to experience of a direct kind, *not* separable from any other intellectual act, but allied to all other acts in being the mental re-presentation of phenomena formerly present in experience. And this will help us, perhaps, to reconcile the combatants who quarrel over the idea of "power" in causation.

Thus while it will be admitted by the one party that between two events, named respectively cause and effect, no *nexus* is perceived by us, over and above the mere fact of antecedence and sequence; and that therefore Hume is right in saying—we only perceive this antecedence, and do not perceive the causal link; on the other hand it must be maintained, that between those two events there is a specific *relation*, a something which makes the one succeed the other, causing this particular effect rather than another; and this subtle link it is which is the *nexus* con-

tended for; this relation it is which distinguishes a casual act from one of accidental sequence. There must be a peculiar relation, or property, existing between oxygen and metals, otherwise metals never could be oxidized. The oxidation of iron is an effect like the ignition of paper; but it is an effect producible only through a specific relation or cause. To say that we cannot know this cause, cannot perceive this relation, and that antecedence and sequence are all that we can perceive, is only saying that we cannot penetrate beyond phenomena and their successions; but this is no more a ground for the denial of a causal nexus, than it is for the denial of an external world.

All things necessarily stand related to all other things: sometimes these relations are obtruded on our notice, because they pass from relations of coexistence into relations of succession, and we name them causes and effects; at other times they remain in the background of unremarked coexistence, and our unsolicited attention overlooks them; we do not then name them cause and effect. The carbonate of lime, which I see before me as marble, suggests to me in its inaction, no conception of power, or causation, because my attention is not solicited by any *successive* relations; yet, if I had witnessed the action of the carbonic acid on the lime, which originally *caused* the two substances to unite and form marble, the passage from one state to another would have suggested the idea of some power at work. It is clear that there must be relations existing between the carbonic acid and the lime, which *cause* the two to remain united, as we see them in marble. We do not see these relations—we do not, therefore, see the cause—but we know the cause must be in operation all the while, although, in consequence of no changes taking place, we are not solicited to observe the operation. Hence it is that only successive phenomena are named causal; and hence is it that Hume was right in saying that *en dernière analyse*, invariableness of antecedence and sequence is all that experience tells us of causation; although he did not, I think, state his position clearly, nor discern its real basis.

This conception of causation, as the direct relation between any two phenomena, whether coexistent or successive, accords with the fact that what is called the effect is itself but the union of two causes—the oxygen and the metal co-operate to form an oxide; the group of facts which we designate as the antecedent, combines with the group of facts called the sequent; as when we say that “Henry I. died of eating lampreys;” by which we mean, that in a certain condition of his organism the introduction of lampreys was the antecedent to a whole series of sequences terminating in death; although we are perfectly aware that the salmon was not the “cause,” but only one integer in the sum of causes. The difficulty in fixing upon a true cause is this very complexity of relations: only when we can be said to know all the elements of a group, can we isolate one to estimate its influence.

I have endeavored to reconcile the two contending parties on this perplexing question, and for all further discussion must refer to John Mill's chapter in his *System of Logic*, where, however, there is a passage which seems to me quite contrary to the doctrine he upholds. I allude to his strictures on the dogma *cessante causâ cessat et effectus*. “*A coup de soleil* gives a man a brain-fever: will the fever go off as soon as he is moved out of the sunshine? A sword is run through his body: must the sword remain in his body in order that he may continue dead?”* Surely this argument is tenable only by those who confound a cause with the whole group of conditions which precede, and the effect with the whole group of conditions which succeed; and is not tenable by those who hold that cause and effect are simply antecedent and sequent. The solar rays striking on the man's head produce a disturbance in the circulation, which in its turn becomes the antecedent to a congestion of the blood-vessels in the brain, which becomes a brain-fever; instead of one succession of cause and effect, we have here a series of such successions; and

* Vol. i. p. 413.

if we could analyze the various stages of the sun-stroke, we should find that each effect did cease on the cessation of the cause; indeed, if an effect be nothing but the sequent of an antecedent—and not the product of some creative power in the cause—it must depend for its existence on the presence of the antecedent.

Hume's theory of causation set Kant speculating on the constituent elements of cognition; but before we follow out the development of Philosophy in that direction, it will be necessary to trace the further development of Locke's influence in other directions.

SIXTH EPOCH.

THE ORIGIN OF KNOWLEDGE REFERRED TO SENSATION BY
THE CONFUSION OF THOUGHT WITH FEELING: THE SEN-
SATIONAL SCHOOL.

CHAPTER I.

CONDILLAC.

§ I. LIFE OF CONDILLAC.

ETIENNE DE CONDILLAC was born at Grenoble, in 1715. His life was passed mainly in study, and was not varied by any of those incidents which give interest and romance to biography. He published his first work, *Essai sur l'Origine des Connoissances Humaines*, in 1746. Three years after, his *Traité des Systèmes*. His other works followed rapidly; and established for him such a reputation, that he was appointed tutor to the Prince of Parma, and for whose instruction he wrote the *Cours d'Etudes*. In 1768 the capricious doors of the Académie Française were opened to him; but once elected a member, he never after attended any of its sittings. He published his *Logique* in his old age, and left behind him his *Langue des Calculs*. He died in 1780.

§ II. CONDILLAC'S SYSTEM.

We have seen how Idealism and skepticism grew out of the doctrines respecting the origin of knowledge. We have now to see the growth of the "Sensational School."

The success which Locke met with in France is well known.

For a whole century the countrymen of Descartes extolled the English philosopher, little suspecting how that philosopher would have disclaimed their homage, could he have witnessed it. Condillac is the acknowledged representative of Locke in France. When his first work, entitled *Essai sur l'Origine des Connoissances Humaines*, appeared, he had no notion of simplifying Locke by reducing all Knowledge to Sensation. He was a modest Lockeist, and laid down as the fundamental principle, that "sensations and the operations of the mind are the materials of all our knowledge—materials which reflection sets in action by seeking their combinations and relations." (Chap. i. § 5.)

In 1754 appeared his celebrated work, the *Traité des Sensations*. In it he quits Locke's principle for that of Gassendi and Hobbes. "The chief object of this work," he says, "is to show how all our knowledge *and all our faculties* are derived from the senses; or, to speak more accurately, from sensations." The inclusion of "our faculties," as well as our ideas, in this sensuous origin, is, however, due entirely to Condillac. Hobbes never thought of such a "simplification." The divergence from Locke is obvious: instead of the two sources of ideas, recognized in the *Essay on Human Understanding*, it assumes one source only—Sensation; instead of mind, with certain elementary faculties, it assumes one elementary faculty—that of Sensibility—out of which all the faculties are evolved by the action of external objects on the senses. Nor was this a mere slip of Condillac's pen: the error is radical; it constitutes the peculiarity of his system. Speaking of various philosophers, and quoting, with praise, the maxim attributed to Aristotle, that "Nothing is in the intellect which was not previously in the senses," he adds, "Immediately after Aristotle comes Locke; for the other philosophers who have written on this subject are not worthy of mention. This Englishman has certainly thrown great light on the subject, but he has left some obscurity. . . . All the faculties of the soul appeared to him to be innate qualities, and he never suspected they might be derived from sensation itself."

Certainly, Locke never suspected any thing of the kind, and would loudly have repudiated it, had any one suggested such a simplification of the psychological problem. He might have asked Condillac, why is it no Ape having the five senses of Man has ever yet been educated as a Man? and if faculties are nothing but sensations, why are the faculties of the Ape so remarkably inferior, when the senses, some of them at least, are so remarkably superior to those of Man? We find, on the one hand, animals having senses like those of man, but *not* having the faculties of man; we find, on the other hand, men deficient in certain senses—sight, hearing, taste, or smell—who, so far from being deficient in mental faculties, are remarkable for their high endowments: a striking example of which is the case of Laura Bridgman, born blind, deaf, and dumb. Nay, among men having all the senses in activity, we find the greatest disparities in mental faculty; and we do not find that the men whose senses are the most susceptible and active, are the men whose intellectual faculties are the most developed; which is strange, if the faculties are nothing but sensations. How does Condillac explain the familiar fact of Idiots being in full possession of their senses? When he makes his famous Statue grow into an Intelligence, by the gradual evolution of one sense after the other, it never occurs to him that he tacitly admits the presence of the very mind which is said to be evolved; since in the absence of that mind the senses will not elevate the statue one inch above idiocy.

Had Condillac been surveying the animal series, and endeavoring to trace the gradual development of Sensibility throughout that series, he might have maintained, with some philosophical cogency, that the various faculties were the derivative products of sensation. But he had no such conception. He looked upon the mind as a *tabula rasa*, a blank page on which sensations wrote certain characters; and instead of regarding the mind in the light of an organism, the food of which was furnished by the senses, he regarded it as a simple granary, in which the grain, or

entering, "transformed itself" into bread, oven, and baker. He thought the senses created the faculties and were the faculties. He might as well have said that exercise creates the faculty of running. The child cannot run till he has exercised his limbs; but the exercise does not *give* him the limbs, it only calls them into action.

Condillac is right in saying that we are not born with the mental faculties developed (a point to be touched upon hereafter), but he is wrong in saying that these faculties are only sensations. And when he endeavored to construct the mind and its faculties out of *transformed sensations*, he never once suspected that the faculty of transformation—*that which* transforms—could not be itself a sensation. It is very easy to imagine transformed sensations; but the sensations do not, we presume, transform themselves. What is it that transforms them? The mind? Not so. The mind is the aggregate of our mental states, faculties, etc.; the mind is made up of "transformed sensations," and cannot, therefore, be the transforming power. We return to the charge, and demand, What is it which transforms? Condillac has no answer. All he can say is, what he says over and over again, that our faculties are transformed sensations. Hear him:

"Locke distinguishes two sources of ideas, sense and reflection. It would be more exact to recognize but one; first, because reflection is, in its principle, nothing but sensation itself; secondly, because it is less a source of ideas than a canal through which they flow from sense.

"This inexactitude, slight as it may seem, has thrown much obscurity over his system. He contents himself with recognizing that the soul perceives, thinks, doubts, believes, reasons, wills, reflects; that we are convinced of the existence of these operations, because we find them in ourselves, and they contribute to the progress of our knowledge; but he did not perceive the necessity of discovering their origin and the principle of their generation—he did not suspect that they might only be acquired

habits; he seems to have regarded them as innate, and he says only that they may be perfected by exercise.”*

This is far enough from Locke,† who would have been amazed to hear that “judgment, reflection, the passions, in a word, all the faculties of the mind, are nothing but *sensation which transforms itself differently* (qui se transforme différemment).”

As it is curious to see how sensation transforms itself into these faculties, we will translate Condillac's account. “If a multitude of sensations operate at the same time with the same degree of vivacity, or nearly so, man is then only an animal that feels; experience suffices to convince us that then the multitude of impressions takes away all activity from the mind. But let only one sensation subsist, or without entirely dismissing the others, let us only diminish their force; the mind is at once occupied more particularly with the sensation which preserves its vivacity, and that sensation becomes attention, without its being necessary for us to suppose *any thing else in the mind*. If a new sensation acquire greater vivacity than the former, it will become in its turn attention. But the greater the force which the former had, the deeper the impression made on us, and the longer it is preserved. Experience proves this. Our capacity of sensation is therefore divided into the sensation we have had, and the sensation which we now have; we perceive them both at once, but we perceive them differently: the one seems as past, the other as present. The name of *sensation* designates the impression actually made upon our senses; and it takes that of *memory* when it presents itself to us as a sensation which has formerly been felt. Memory, therefore, is only the transformed sensation. When there is double attention, there is comparison; for to be

* *Extrait raisonné du Traité des Sensations: Œuvres de Condillac* (1803), iv. 13.

† It would be idle to refute here the vulgar notion that Condillac perfected Locke's principles; or, as M. Cousin absurdly says, that Locke's *Essay* was the rough sketch (*ébauche*) of which the *Traité des Sensations* is the perfected picture; such a notion can be entertained only by those who blindly accept traditionary judgments. The brief exposition we shall give of Condillac is a sufficient answer to all such assertions.

attentive to two ideas or to compare them, is the same thing. But we cannot compare them without perceiving some difference or some resemblance between them: to perceive such relations, is *to judge*. The acts of comparing and judging are therefore only attention; it is thus that sensation becomes successively attention, comparison, judgment."

The other faculties are explained in a similar way, but we need quote no more. That such a system should ever have attained the favor it did, is a striking example of the facility with which men may be misled by an artful use of words.

Condillac said that science is only a well-constructed language (*une langue bien faite*); so much did he rely upon precision in words. Nor is this inexplicable in a man who fancied he had reduced the analysis of mind to its simplest elements by merely naming them differently. It is, however, as absurd to call ideas sensations because the ideas were originated by sensations, as it would be to call reasoning observation, because reasoning is founded on observation. The only excuse for the error is in the common, but false, supposition that ideas are faint impressions. They are not impressions at all. Condillac says that an idea is a remembered sensation, and this remembrance is only a lesser degree of vivacity in the sensation. We answer that the idea is nothing of the kind; so far from being the sensation in a lesser degree, it is not the sensation at all; it is altogether different from the sensation. Although every man who has experienced toothache, can have a very distinct idea of it (in other words, he can think of, and talk of toothache), we defy him to detect in his idea any repetition of the *sensation*. Nor is this wonderful; sensation is the product of a distinct part of the nervous system, the senses; ideas are the product of another distinct part of the nervous system, the cerebrum: sensation is *feeling*, thought is *thinking*. To suppose feeling and thinking are the same (although both may come under the term feeling, by giving the word some new general signification), is an absurdity reserved for the Sensational School, the last and not the least illustrious

of whom, M. Destutt de Tracy, consolidated it into an aphorism : *penser c'est sentir*.

The ambiguities of language have in this case been assisted by the nature of our sensations. Thus all our visual ideas, inas-much as they assume shape, do *seem* like faint sensations; the reason is, that although it is a very different thing to *look* at the sun and to *think* of it, yet in thinking, our idea corresponds, in some measure, with our sensation : the idea is of a round, yellow, luminous body, and is not improperly called an *image* of the sun. If it is an image of the sun, we easily conclude that it is a faint copy of our sensation. But in the case of other senses, there is no difficulty in detecting the error. When we say that we can *recall the sensation* of hunger, we verbally confound our power of thinking a thing, with our power of feeling it. There is, in truth, a generic distinction between Thought and Sensation, which it is fatal to overlook; nor could it have been overlooked but for the introduction and adoption of that much-abused word "idea," instead of thought.

I do not believe we can recover *any* sensation at all, but only the ideal effect of the sensation. Mr. Bain, who of all psychologists, as it appears to me, has approached nearest to the truth, here remarks, that the "exact tone of feeling, the precise inward sensation due to a state of hunger, is almost irrecoverable and unimaginable in a state of comfortable repletion." I believe it to be utterly irrecoverable. "But," he adds, "the uneasy movements, the fretful tones, the language of complaint, are all easy to recall; they belong to the more intellectual part of the system; and by these we can recover some portion of the total fact, which is also just about as much as we can communicate to a second person. The digestive state for the time being, rules the tone of sensation so effectually, that we cannot, by any effort, restore the currents due to an entirely opposite state; we can only recover the more revivable accompaniments."* The reason

* *The Senses and the Intellect*, p. 337.

of this I take to be simply the impossibility of displacing a sensation (*e. g.* that of repletion) by an idea. The sensation of hunger was due to a peculiar stimulus of the nervous system; so long as that stimulus was present, the sensation was present; when another stimulus replaced it, another sensation succeeded, and in the presence of that stimulus no other sensation is recoverable. The "revivable accompaniments" were not sensations, but the *sequences* of sensations, ideal elements. When Mr. Bain contrasts the sense of sight with the sense of hunger, and says "that we can recover a picture or vision of fancy almost as exactly as we saw it, though not so strongly," and thinks that this gives to the sense of sight its "intellectual character," he appears to me to overlook the generic distinction between Sensation and Thought, a distinction which Condillac and his school systematically set aside. "We can repossess ourselves," he adds, "*Of the exact scene as it lay to the eye; in fact the sensation itself is the most retainable part of the whole.*" I cannot but think that, if Mr. Bain will reconsider this statement, he will admit that the sensation itself is precisely the part which is *not* retainable, not recoverable; for although the image of the landscape beheld in memory is like the actual scene which we gazed upon—or, in more accurate language, although we are similarly affected by the remembrance as by the original stimulus—yet a psychologist of Mr. Bain's rank does not need to be told that the landscape in perception is constituted by a variety of intellectual inferences—all its relations of space, form, solidity, etc., being purely intellectual elements, and these *only* are the elements present in the remembrance, the actual *sensations* not being present at all. What therefore is recoverable, is the purely intellectual part of the whole; what is irrecoverable, the sensational; precisely as in the case of hunger: we can recall the effects of hunger, even when quietly digesting dinner, but we cannot recall the sensation of hunger.

The point in dispute is so important, and is so intimately bound up with the whole doctrine of the Sensational School,

forming indeed the battle-ground of all psychological doctrine, that we must consider it with more than a passing attention. The confusion of Sensation with Ideation, or Thought, is Condillac's systematic error; but it is an error from which few, if any writers, even of the spiritualist schools, have been free. Explicitly, or implicitly, these two phenomena have been regarded as two aspects of the same thing. The rigorous demarcation of Sensation as one process, from Ideation as another process,—each dependent on its separate nervous centre,—will be found in no psychological treatise. Nevertheless, Comparative Anatomy has succeeded in demonstrating the independence of the organs of Sense, and the Brain-proper; although no one has yet succeeded in detecting the true relations which connect these independent centres, and make them act together. We know that the brain is as much an *addition* to the organs of Sense as these organs are additions to the nervous system of the simpler animals. Low down in the animal scale we can detect no trace at all of a nervous system; ascending a few steps, we detect a simple ganglion with its prolongations; ascending higher, we detect a more complex arrangement of ganglia, and rudimentary organs of Sense; ascending still higher and higher, we detect more complex organs of Sense, and a rudimentary Brain; till at last we arrive at man, with his complex organs and his complex Brain. But so independent is the Brain, that even in the human species cases occur of “anencephalous monsters,” that is to say, children born without any Brain whatever; and these children breathe, suck, cry, and struggle, like other children.

Further, it is ascertained that the function of this Brain (or Cerebrum) is Thought—or, as James Mill, with a nice sense of utility, proposed to call it, Ideation. Granting this, we grant that the functions Sensation and Ideation are as independent as the organs of which they are the functions; and although Ideation is organically connected with Sensation, yet not more so than muscular motion is connected with Sensation. Neither the

anatomical nor the psychological connections of the two have been accurately discriminated, but the broad fact of their independence suffices for my present argument; which is merely to establish the position that the organs of Sense are competent to Sensation, without the addition of a Brain; and that the Brain, although constantly set into action by the organs of Sense, is in itself a separate centre, and the seat of specific actions.*

It is customary to speak of the organs of Sense as if they were simple organs; we must not therefore innovate in this matter, although we find it needful to remind the reader that each special sense is really the function of a complex apparatus of organs. The apparatus of Sight, for example, may be separated into at least three parts:—1st, for the reception of impressions of light; 2d, for the transmission of those impressions; 3d, for the sensation. Of these the last need only here be specially considered, and may be called the *Sensational Centre*.† In this centre the external stimulus becomes a sensation; from this centre the sensation is generally (not always) propagated to the cerebrum, which in turn may propagate the influence to the centre of muscular motion, or elsewhere.

Every sense, whether it be one of the five special senses, or of the so-called “organic senses” (such as those of the alimentary canal or of muscular activity), has its own special centre, or *sensorium*; but there seems to be no ground for assuming, with Unzer and Prochaska, the existence of any one general *sensorium*, to which these all converge; and I shall speak therefore of the *Sensational Centres* as the seats of sensations derived from

* See this point illustrated in detail by Unzer and Prochaska, in their treatises translated for the Ray Society by Dr. Laycock.

† I would call it sensory ganglion, if that did not presuppose the existence of a distinct ganglion, anatomically separable in the higher animals, as it is in those lower animals which have nothing but sensory ganglia. At present, however, science does not warrant such a statement otherwise than as an hypothesis. Besides, I include the spinal chord among the general Sensational Centres. Compare Prochaska, p. 430.

the stimuli which act on the organs of sense. Considered as Sensational Centres, they are perfectly independent of the Brain; they may and do act without implicating the Brain, for they will act when the Brain is absent: a bird deprived of its cerebrum manifests unequivocal symptoms of being sensitive to light, sound, etc. But in the normal state of the organism these centres are intimately connected with the Brain; and the stimuli which affect them directly, indirectly affect the Brain. Light, impinging on the retina, determines a change in the optic Sensational Centre; this change is usually propagated to the cerebrum; and as the first change was a sensation, so is the second an idea: this idea may excite other ideas, or it may be so faint in its influence as to be almost immediately absorbed, and then we are said to be "scarcely conscious" of the sensation—meaning that we thought very little about it: an example of which is the little attention we pay to the clock striking when we are engaged in study, if the fact is indifferent to us; we hear it, but think not of it the next moment; if on the other hand the striking of the clock is not indifferent to us, the various thoughts which it awakens make us eminently "conscious of the sensation." In the heat of battle, a sword passes through a man's arm, and nevertheless the wound is followed by no pain or "consciousness;" the stimulus which under ordinary circumstances would have been propagated from a Sensational Centre, and thence radiating to the cerebrum, would have roused up manifold ideas, namely, of consequences, what was necessary to be done, etc., is prevented from so radiating, and is not carried beyond the Sensational Centre.

Not only can we have sensations without being conscious of them—*i. e.* without thinking about them; we can also think with perfect freedom when all the Sensational Centres (except those of organic life) are unaffected by any stimulus, *i. e.* when we have no sensations. We do so when awake in bed during the stillness of night: the senses are in repose, the Brain is active.

Thus is the independence of Ideation and Sensation proved

psychologically and anatomically; and with this proof we destroy the basis of Condillac's doctrine. But even on purely metaphysical grounds we may reject his theory of the origin of knowledge. It rests on two positions;—the first is the reduction of all knowledge to sensation; the second is the dogma of our faculties not being innate. The first is the doctrine of Gassendi and Hobbes. It is thus stated by Diderot, one of Condillac's most celebrated pupils:—"Every idea must necessarily, when brought to its state of ultimate decomposition, resolve itself into *a sensible* representation or picture; and since every thing in our understanding has been introduced there by the channel of sensation, whatever proceeds *out* of the understanding is either chimerical or must be able, in returning by the same road, to re-establish itself according to its sensible archetype. Hence an important rule in philosophy, That every expression which cannot find an external and a sensible object to which it can thus establish its affinity, is destitute of signification."*

Those who maintain sensuous experience to be the basis of all knowledge, will of course assent to the position that every one of our ideas can be decomposed into sensuous elements; but ideas themselves are not sensations, they are formed from sensations, and are not sensible pictures. The least experience is sufficient to convince us that we have many ideas which cannot be reduced to any *sensible picture* whatever; or, to prevent any of the ambiguity which belongs to the word "idea," let us rather say we have many thoughts which cannot be reduced to any sensible picture. We can think of a sound without any power of forming a picture of sound; we can think of virtue or goodness, of patriotism or scoundrelism, without being able to form mental pictures of these ideas.

Now for the second point: Condillac, we believe, was the first to catch a glimpse of the important truth that our *faculties* are not innate—are not even connate; but he bungled in attempting

* Quoted by Dugald Stewart, *Philosophical Essays*, p. 166.

to trace the genesis of these faculties. That men are not born with the powers of reasoning, remembering, imagining, is a proposition which will meet with very little credit at first. A little experience and reflection however show us that as the child certainly cannot reason, remember, or imagine, these being faculties subsequently and slowly developed, we must conclude that the mental faculties are only *potentially* in the new-born child. The baby can no more reason than he can talk. He *learns* to do both; and, before he can learn them, the powers of his mind no less than the muscles of his vocal organs must grow, be developed, and strengthened by exercise. Man is no more born with reason than an acorn is born an oak. The grown man has reason, as every oak has branches and foliage. But the infant and the acorn, though they contain that within them which, under fitting circumstances, will be developed into reason in the one, and foliage in the other, cannot be said to have as yet either reason or foliage.

This is an important discovery, and yet one which is apparently obvious, and obtruded upon our experience by the daily observation of children. Condillac has the merit of having first seen it; but he saw it very imperfectly, and failed altogether to make any good use of it. As an example: He who told us that our faculties were not innate, but were "acquired habits," tells us, when he comes to the genesis of those faculties, that they spring into existence at once—are born full-grown—the acorn suddenly leaps into an oak. Thus his famous statue has Memory, Judgment, Desire, etc., as soon as it has Sensations. This is enough to show that if Condillac discovered an important fact, he only stumbled over it, and knew not its significance.* Let us hope that, if England is to produce any new system of Psychology, this most important point will not be overlooked: the growth and development of our faculties is as much a part

* The only person who, to our knowledge, has made any use of this fact, is Dr. Beneke, who has made it the basis of his whole philosophy. See his *Neue Psychologie*, also the *Lehrbuch der Psychologie* (Berlin, 1845).

of Psychology, as the growth and development of our organs is a part of Biology.*

Condillac has made but a poor figure in our pages; let us hasten to add, that although his fundamental positions are erroneous, his works display considerable merits both in manner and matter. Many valuable remarks, and some good analyses, may be found in his writings; and the style is admirably clear. He departed so widely from Locke, that it seems strange he should ever have been considered as a disciple. But we have express testimony to the fact that he was Locke's disciple; and if we consider for a moment the great stress which Locke always placed upon the sensuous origin of our knowledge—that being the point he wished to bring prominently forward, because his precursors had neglected it—we shall easily conceive how Condillac might have been more impressed with that part of the system than with the other, which Locke had rather indicated than developed. Moreover it was Locke's object to prove the mind to be a *tabula rasa*, in order to disprove innate ideas. This once being granted, it was easy to fall into the error of Condillac's "simplification."

Condillac was clear, but much of his clearness was owing to his shallowness; much of the simplicity was owing to meagreness. He tried to construct Psychology upon no firmer basis than that adopted by the metaphysicians whom he opposed. Analysis of mental operations and merely verbal distinctions had been powerless in the hands of his precursors, nor were they powerful in his. In many subordinate matters he improved on them; some of his analyses were better; many of his verbal distinctions were useful; but he had no true psychological Method, and could found no desirable system. The idea of connecting Psychology with Biology had not yet been distinctly conceived. Although the brain was universally held to be the "organ" of the mind, the mind was, by the strangest of oversights, *not* re-

* Since this was written Mr. Herbert Spencer has expounded the development of the faculties in his very remarkable *Principles of Psychology* (1855).

garded as the function of that organ;* consequently no one thought of connecting the study of the mind with the study of the nervous system; no one thought of a physiological basis as indispensable to psychological science. We shall see hereafter what attempts have been made in this direction. The first step may be said to have been taken by Hartley.

CHAPTER II.

HARTLEY.

§ I. LIFE OF HARTLEY.

DAVID HARTLEY, the son of a Yorkshire clergyman, was born on the 30th of August, 1705. He went to Cambridge at fifteen, and became a Fellow of Jesus College. Originally destined for the Church, he had scruples about signing the Thirty-nine Articles, and gave up the Church for Medicine, which he subsequently practised with great success.

When only twenty-five years of age he conceived the design and commenced the execution of his celebrated *Observations on Man, his Frame, his Duty, and his Expectations*, led thereto, as he tells us in the Preface, by hearing that "the Rev. Mr. Gay had asserted the possibility of deducing all our intellectual pleasures and pains from association." Mr. Gay published his views in a dissertation prefixed to Law's translation of King *On the Origin of Evil*; but although Hartley acknowledges having

* I may here enter a brief caveat against the conclusion that I hold the "mind to be the function of the brain." This is no place to argue so wide a question; and I content myself with saying, that in the crude form in which that opinion is frequently presented, I do not agree. Ideation I hold to be one function of the brain; but Mind is something more general than this special function of Ideation; and the brain has other functions besides Ideation, other functions than any usually called mental.

derived the suggestion from Gay, it is clear to all readers of his work, that he had thoroughly mastered, and made his own, the principle of Association as the primary law of intellectual combination. Hartley did not publish his *Observations* till 1748, eighteen years after the scheme was first laid. The year before, according to Dr. Parr, he published a small treatise as a precursor to this work. "You will be astonished to hear," Dr. Parr writes to Dugald Stewart,* "that in this book, instead of the Doctrine of Necessity, Hartley openly declares for the indifference of the will, as maintained by Archbishop King." And the reader will be astonished to hear that Hartley does no such thing! Dugald Stewart, who had not seen the work referred to, remarks that "it is curious that, in the course of a year, Hartley's opinions on so very essential a point should have undergone a complete change;" still more curious, however, that Dr. Parr should have read the work and discovered in it such a mare's-nest. The tract in question is reprinted in the volume of *Metaphysical Tracts by English Philosophers of the Eighteenth Century. Prepared for the Press by the late Rev. Samuel Parr, D.D. London, 1837*—a volume precious to metaphysical students, because it contains Collier's *Clavis Universalis* and *Specimen of True Philosophy*. If the reader will turn to the third of these tracts, *Conjecturæ quædam de Sensu, Motu, et Idearum Generatione*, without date, he will find that it is nothing more nor less than an abstract, in Latin, of the first part of Hartley's *Observations*; and that the question of Free-will is nowhere opened in it. I can only suppose that Dr. Parr, unacquainted with physiological speculations, was misled by the admirable discussion of automatic and voluntary actions (pp. 31–35), into the notion that Hartley there espoused the doctrine of free-will; but I am surprised that Sir W. Hamilton should have allowed the error to pass uncorrected in his edition of Stewart's Dissertation.

Hartley died on the 25th of August, 1757, aged fifty-two, and

* Stewart's *Dissertation*, part ii. p. 355 of Hamilton's edition.

left a name so distinguished for piety and goodness, that it in a great measure shielded his doctrines from the reprobation they have often incurred when promulgated by others.

§ II. HARTLEY'S SYSTEM.

Combining a suggestion thrown out by Newton at the end of his *Principia*, and in the questions annexed to his *Optics*, respecting vibrations of an ether as the cause of sensation, with the doctrine of Locke respecting Association of Ideas, Hartley produced a system of Psychology, which is historically curious as the first attempt to explain psychological phenomena on physiological principles. If not worth much as a contribution to Philosophy, it is very noticeable as an effort to connect intellectual with physical phenomena; and, however subsequent writers may have ridiculed, not without excuse, the vibrations and vibratiuncles which Hartley substituted for the old metaphysical conceptions, it is certain that his attempt to explain the phenomena physiologically, has very much influenced the thoughts of succeeding speculators.

"Man," he says, "consists of two parts, body and mind." Does he mean by this to proclaim the existence of a distinct, immaterial entity superadded to the body? According to the terms of his definition, on the first page of his work, this seems to be his intention; for he defines it as "that substance, agent, principle, etc., to which we refer the sensations, ideas, pleasures, pains, and voluntary motions." Yet the whole system of vibrations seems to imply the contrary; and at the close of the first part of his work, he declares that he holds himself aloof from the question altogether. He will not deny the immateriality of mind: "On the contrary, I see clearly, and acknowledge readily, that matter and motion, however subtly divided, yield nothing more than matter and motion still. But then neither would I affirm that this consideration affords a proof of the soul's immateriality." He thinks, with Locke, that it is quite possible the Creator should have endowed matter with sensation; but he will

not undertake to affirm it as a truth. "It is sufficient for me that there is a certain connection, of one kind or other, between the sensations of the soul, and the motions excited in the medullary substance of the brain."* A more rigorous logic would have forced him into a more decided opinion; for this question of the soul's immateriality is one vitally affecting the system of vibrations; and his adversaries have had little difficulty in showing the insufficiency of "vibrations" to explain the phenomena of an immaterial mind. Between the immaterial principle and these material vibrations, there is an impassable gulf; let the other vibrate never so rhythmically, it always remains "vibrating ether," it cannot become "sensation," "thought;" nor does Hartley bridge over the gulf by the assumption of an "infinitesimal elementary body intermediate between the soul and the gross body," to which, and from which, the vibrations of the nerves are communicated; the radical difficulty remains the same.

It may be objected, perhaps, that those who point out the defect in Hartley's hypothesis are themselves open to a similar charge, since they assume an immaterial principle to be effected by a material change, and assume the mind to be in connection with the body, following its alterations. But there is this difference between them and Hartley: they do not pretend to explain how mind is affected by body; he does. They accept, as an ultimate fact, what he attempts to elucidate; and it is his elucidation which they refuse to acknowledge.

And we must agree with them in rejecting the hypothesis which Hartley proposes; for it is not only incompetent to explain the phenomena, but it is also one of those ingenuities incapable of really serving the purpose of a good hypothesis, because in itself wholly incapable of verification.

His first proposition is that "The white medullary substance of the brain, spinal marrow, and the nerves proceeding from

* Compare also Scholium to Prop. 5 (vol. i. p. 83) and *Conjecturæ quædam de Sensu*, etc., p. 41.

them, is the immediate instrument of sensation and motion." Modern physiologists maintain precisely the reverse of this, declaring the *gray* matter to be the specific seat of sensation and intelligence. I may say, in passing, that both these positions seem to me erroneous in their exclusiveness; and that the white as well as the gray substance must be present, just as the zinc and copper plates must both be present in the galvanic battery.

Hartley continues: "External objects impressed upon the senses occasion, first in the nerves on which they are impressed, and then in the brain, Vibrations of the small—or, as any one may say, infinitesimal—medullary particles. These Vibrations are motions backwards and forwards, of the same kind as the oscillation of pendulums, and the tremblings of the particles of sounding bodies. They must be conceived to be exceedingly short and small, so as not to have the least efficacy to disturb or move the whole bodies of the nerves or brain. For that the nerves themselves should vibrate like musical strings is highly absurd."

It appears from a passage in the *Contemplation de la Nature* of the Genevese naturalist, Charles Bonnet, who published, almost contemporaneously with Hartley, a doctrine almost indistinguishable from Hartley's, that certain physiologists had already entertained the idea of sensation being the result of a nervous oscillation. "Ils vouloient faire osciller les nerfs pour rendre raison des sensations; et les nerfs ne peuvent pas osciller. Ils sont mous, et nullement élastiques."* Not the nerves, but the elastic ether which penetrates the nerves, is the seat of these oscillations, according to Hartley and Bonnet.

The greatest defect of this hypothesis is that it explains nothing, while seeming to explain every thing. Sensation remains as mysterious as before. If we call sensations by the new name of vibrations, we have done nothing but change the name; and if we say sensations *are* vibrations, or are produced by them, then the onus of proof rests on our shoulders.

* Partie vii. ch. i.

While acknowledging the defect of Hartley's system, let us not forget its excellence. If the doctrine of Association was not first applied by him, it was by him first made a physiologico-psychological basis. He not only applied it to the explanation of mental phenomena; he applied it, and with great ingenuity, to those physiological phenomena which still interest and perplex philosophers, namely the voluntary and involuntary actions. His twenty-first proposition, and the elucidations which follow, deserve to be read, even in the present day; and the following passage from the abstract published in Parr's *Tracts*, is, in its pregnant brevity, worth quoting here. "Discentes pulsare instrumenta musica, primo movent digitos actione voluntariâ, connectentes interea Ideas, imperiaque Animæ, hos motus lentè excitantia, cum aspectu characterum musicorum. Continuato hoc processu, accedunt indies, propius propiusque ad se invicem, motus digitorum, et impressiones characterum, et tandem, Ideis et imperiis Animæ in infinitum quasi diminutis, coalescunt. Fidicen igitur peritus chordas digitis percurrit citissimè, et ordine justo, ex mero aspectu characterum musicorum, *animo interim alienis cognitionibus intento*; atque proinde characteres musici idem illi præstant officium, ac Sensationes impressæ recens natis, in motibus eorum automaticis. Migrant itaque ope Associationis tam Motus voluntarii in automaticos, quam automatici in voluntarios."*

So little dependent is the psychological doctrine of Association on the physiological doctrine of Vibrations, that Priestley, in his *Abridgment of Hartley*, omits the latter hypothesis altogether. The principle of Association passed into the Scotch school; and Hartley thus historically forms the transition to Reid and his followers, who studiously avoided any thing like a physiological explanation of mental phenomena. Before passing to Reid, however, it will be well to glance at Darwin.

* *Conjecturæ*, p. 34.

CHAPTER III.

DARWIN.

ALTHOUGH even more neglected than Hartley by the present generation, Darwin, once so celebrated, deserves mention here as one of the psychologists who aimed at establishing the physiological basis of mental phenomena.

Erasmus Darwin was born at Elton, near Newark, on the 12th December, 1731. After studying at St. John's College, Cambridge, and taking his degree of Doctor of Medicine at Edinburgh, he established himself as a physician in Lichfield, married twice, had three sons, and died in the seventieth year of his age, 18th April, 1802. As a poet, his *Botanic Garden* (1781) by its tawdry splendor gained him a tawdry reputation; as a philosopher his *Zoonomia; or, Laws of Organic Life* (2 vols. 4to, 1794-6), gained him a reputation equally noisy and fleeting.

Although couched in different language, Darwin's theory is substantially the same as Hartley's; instead of "vibrations" he substitutes "sensorial motions." By the sensorium Darwin means "not only the medullary part of the brain, spinal marrow, nerves, organs of sense, and of the muscles; but also at the same time that living principle, or spirit of animation, which resides throughout the body without being cognizable to our senses, except by its effects." The changes which occasionally take place in the sensorium, as during the exertions of volition, or the sensations of pleasure or pain, are termed *sensorial motions*.*

The medullary substance, he thinks, passes along the nerves and mingles with the muscular fibres. The "organs of sense consist in like manner of moving fibres enveloped in the medullary substance." The word *idea* has various meanings, he says,

* *Zoonomia*, vol. i. p. 10.

and to give it precision he defines it as "a contraction or motion, or configuration of the fibres which constitute the immediate organ of sense. Synonymous with the word *idea* we shall sometimes use the words *sensual motion*, in contradistinction to *muscular motion*."

He then undertakes to prove the existence of these sensual motions, and deduces from this proof the fact that as we advance in life all the parts of our bodies become rigid, and are consequently less susceptible of new habits of motion, though they retain those already established. Hence only the young can learn; hence the aged forget the events of yesterday and remember those of infancy.*

"If our recollection, or imagination, be not a repetition of animal movements, I ask, in my turn, What is it? You tell me it consists of images or pictures of things. Where is this extensive canvas hung up? or where the numerous receptacles in which these are deposited? or to what else in the animal system have they any similitude? That pleasing picture of objects, represented in miniature on the retina of the eye, seems to have given rise to this illusive oratory! It was forgot that this representation *belongs rather to the laws of light than to those of life*; and may with equal elegance be seen in the camera obscura as in the eye; and that the picture vanishes forever when the object is withdrawn."†

Had Darwin left us only the passage just cited, we should have credited him with a profounder insight into Psychology than any of his contemporaries, and the majority of his successors, exhibit; and although the perusal of *Zoonomia* must convince every one that Darwin's system is built up of absurd hypotheses, Darwin deserves a place in history for that one admirable conception of psychology as subordinate to the laws of life. So

* *Zoonomia*, vol. i. p. 27.

† *Ibid.*, p. 29. In Bain's *Senses and the Intellect*, p. 60 sq., the reader will find the old theory of a *sensorium*, or chamber of images, which Darwin here pushes aside, satisfactorily refuted from the physiological point of view

little has this conception been appreciated, that not only are systems of Psychology constructed in serene indifference to Physiology, but many of the questions agitated in mental Physiology are hopelessly entangled because men will not, or cannot, discriminate between problems of Physics and problems of Physiology; between phenomena regulated by laws of inorganic matter, and phenomena regulated by laws of organic matter. Thus the questions, Why with two eyes do we see objects *single*? and, Why do we not see objects *inverted*, since their images are inverted on the retina? have puzzled thousands; and not one of the attempted solutions has recognized the important fact that the problems are *psychological*, not optical nor anatomical, consequently cannot be settled by optics or anatomy; angles of incidence, and discussion of optic nerves, have nothing to do with the phenomena the moment after the Sensational Centre has been affected. We might as well attempt to deduce the assimilation of sugar from the angles of its crystals, or from the sand-like disposition of its grains, as to deduce the perception of an object from the laws of optics: the crystals and grains of sugar must first be *destroyed*, and the sugar made soluble, before it can be assimilated; the retinal images must, in like manner, first be transformed in the Sensational Centre before they can, through the sensational centre, affect the cerebrum.

That this is no gratuitous hypothesis of mine, but expresses the actual process of perception, in as far as that process has been ascertained, may perhaps be made clear from the following considerations. When I say that the perception of a visual object is a psychological act, not in any way explicable by the laws of optics, or by any investigation of the anatomical structure of the optic apparatus, I ground that assertion on certain authoritative facts; for example, I take up the vexed question of our perceiving an object as single, although two images are formed on the two retinas; and instead of endeavoring to explain it by delicate anatomy of the retina, or the decussating fibres of the optic nerves, I at once remove it from that circle of discussion by class-

ing it with phenomena precisely analogous. We see objects single with two eyes; true, but we also hear sounds as single with two ears, we smell odors as single with two nostrils, we feel objects as single with five fingers. How is it that no physiologist has reflected on the bearing of these facts? If the ordinary explanations of optical perception are correct, why do not auditory and olfactory nerves decussate?—Why do not the waves of sound affect similar points of the tympanum—and so the whole mystery be cleared up? No sooner is attention called to the fact of single hearing and single smelling, with two auditory and two olfactory nerves, than we at once cease to regard single vision with two optic nerves as any thing special, and we try if a psychological explanation will not avail. I believe the explanation to be very simple. *We cannot have two precisely similar sensations at precisely the same instant; the simultaneousness of the two sensations renders them indistinguishable.* Two sounds of precisely the same pitch and intensity, succeeding each other by an *appreciable* interval, will be heard as two sounds; but if they succeed each other so rapidly that the interval is inappreciable, no distinction will be felt, and the two will be heard as one, because heard simultaneously. As I am forced to be very brief here, the reader will not expect any development of this theory, but will pass with me to the consideration of other psychological aspects of perception.

The fact of our being able to see an image reflected on the retina of an animal, and of our being able to explain on optical principles the formation of that image, has very much misled physiologists in their efforts to comprehend sensation; they have naturally imagined that in vision we see the retinal image; whereas, unless I am altogether mistaken, we see nothing of the kind—we are affected *by* that retinal image, as in hearing we are affected by a wave of air, but do not perceive the wave; or as in smelling we are affected by the action of volatile substances on the olfactory nerve, but do not perceive the substances. We only perceive the changes effected in us by these agents.

The various Sensational Centres (see p. 598) are *variously* affected by the *same* stimuli: electricity giving to the gustatory nerve the stimulus of savourous bodies, to the auditory nerve the stimulus of sonorous vibrations, to the optic nerve the stimulus of luminous bodies, to the tactile nerves the stimulus of touch. Pressure on the eye causes luminous spots to be seen; we seem to see fire-flies. The pressure of over-distended blood-vessels produces spectral illusions, and we *see* daggers in the air as vividly as any at our sides. Unhappy students well know the "singing in the ears" produced by over-study. Nor is this all: narcotics introduced into the blood excite in each Sensational Centre the specific sensation normally excited by its external stimuli; giving the appearance of luminous spots to the eyes, of singing in the ears to the auditory nerves, and of "creeping sensations" to the nerves of touch.

The reason of this is that each Sensational Centre has its specific manner of being affected, no matter what the specific nature of the thing affecting it. While only certain things affect it sensationally, all those which *do* affect it, do so in a specific manner. Light, for instance, affects the optic centre, but produces no appreciable effect on the auditory, gustatory, or tactile centres; nevertheless the optic centre may be affected by pressure, by narcotics, or by electricity, precisely in the same way as by light. The vibrations of a tuning-fork, which affect the auditory centre as sound, affect the tactile centre as "tickling," not "sound."

From these indubitable facts it is not difficult to elicit a conclusion, namely, that sensation depends on the Sensational Centre and not on the external stimulus, that stimulus being only the cause of the sensational change. Whether the retina be directly affected by rays of light issuing from an object, or the optic centre be affected by the pressure of congested blood-vessels, in each case we *see*, in each case the optic centre is affected in that specific manner in which alone it is capable of being affected. Consequently inasmuch as the visual sensation depends on the optic

centre being affected, and does *not* depend on the formation of an image on the retina, we have no alternative but to admit that the *retinal affection is transformed by the Sensational Centre*, and there the *impression* first becomes a *sensation*.

It may be added as confirmation of the foregoing doctrine respecting the centre as the seat of sensation, that Müller has cited examples of luminous spectra being 'excited by internal causes after the complete destruction of the retina; and "Luicke relates the case of a patient who, after the extirpation of the eye for fungoid disease, perceived all kinds of luminous appearances independently of external objects."*

When therefore it is asked, Why do we see objects *erect*, when they throw *inverted* images on the retina? the answer is, Because we do not see the retinal image at all; we see, or are affected by, the object; and our perception of the erectness of that object does not depend on vision, but on our conceptions of space and the relations of space—which are not given in the visual sensation, but are ideal conceptions: conceptions which are acquired in a complicated series of inferences, according to most philosophers; which are "forms of thought," according to Kant; but which are by no school held to be immediate elements of sensation.

We thus return to the position that in every act of consciousness the impression on the nerve becomes transformed into a sensation only in the Sensational Centre; and the old theories of "eidola," "images," "impressions," are seen to be untenable. Just as the crystals of sugar have to be decomposed, and the sugar transformed into glucose, the glucose transformed into lactic acid, before sugar can be assimilable in the organism, so have the retinal images to be decomposed in the optic centre before a visual *sensation* can be produced. Attempt a more direct process, and failure is inevitable: cane-sugar injected into the veins is expelled in the urine as a foreign substance, not assimi-

* Müller, *Physiology*, Eng. Trans. i. 1072.

ble ; and, in like manner, the most dexterous adjustment of rays of light falling *immediately* on the optic ganglion, not transmitted thereto by the optic nerve, would produce no visual sensation.

Does not this demonstrate the purely subjective nature of all our knowledge, and the necessary admixture of the ideal element in all perception ? It also demonstrates the futility of the theory adopted by Hartley and Darwin, which attempts to explain mental phenomena by "vibrations" and "motions." Motion can only be motion, it cannot be the specific phenomena we name sensation. To call sensations and ideas by the vague name of motions, is to violate the conditions of philosophic language, and to mislead those who accept it into the belief that an explanation has been given in the change of term. That Darwin was by it misled into absurdity will be apparent in the following attempt to explain perception :

"No one will deny," he says, "that the medulla of the brain and nerves has a certain figure ; which, as it is diffused through nearly the whole of the body, must have nearly the figure of that body. Now it follows that the spirit of animation, or living principle, as it occupies this medulla and no other part, has also the same figure as the medulla . . . which is nearly the figure of the body. When the idea of solidity is excited, a part of the extensive organ of touch is compressed by some external body, and this part of the sensorium so compressed exactly resembles *in figure* the figure of the body that compressed it. Hence when we acquire the idea of solidity we acquire at the same time the idea of *figure* ; and this idea of figure, or motion of a *part* of the organ of touch, exactly resembles *in its figure* the figure of the body that occasions it ; and thus exactly acquaints us with this property of the external world."*

He is thus brought back to the old conception of the mind being "impressed" by the exact forms of objects as wax is impressed by a seal. As he proceeds he gets more and more ab-

* *Zoonomia*, pp. 111-2.

surd. Thus he says, although "there may exist beings in the universe that have not the property of solidity; that is, which can possess any part of space at the same time that it is occupied by other bodies; yet there may be other beings that *can assume this property of solidity or disrobe themselves of it occasionally*, as we are taught of spirits and of angels; and it would seem that the *spirit of animation* must be endued with this property, *otherwise how could it occasionally give motion to the limbs of animals?* or be itself stimulated into motion by the obtrusions of surrounding bodies, as of light or odor?"* He is led to this by the Spinozistic axiom, that "no two things can influence or affect each other which have not some property common to both of them," which axiom destroys the possibility of spirit acting on body. Hartley, as we saw, tried to get over this difficulty by assuming the existence of a substance intermediate between body and spirit. Darwin finds it easy to assume that the spirit has the power of putting on or putting off the properties of matter just as it pleases. "Hence the spirit of animation at the time it communicates or receives motion from solid bodies must itself possess some property of solidity. And at the time it receives other kinds of motion from light, it must possess that property which light possesses to communicate that motion named Visibility. In like manner it possesses Saporosity, Odorosity, Tangibility, and Audibility."†

This is enough to show how little Darwin understood the real value of his luminous idea respecting Psychology based on the laws of life; enough also to make every one understand how philosophers rebelled against such "materialism" as issued from the explanation of mental phenomena by "sensory motions." Before finally quitting the *Zoonomia* we must pause a moment over the explanation of our feeling for Beauty. He describes the sensations of the babe when "soon after it is born into this cold world it is applied to its mother's warm bosom," and the agree-

* *Zoonomia*, p. 114.

† *Ibid.*, i. 115.

able influences which thus grow up in the mind associated with the form of the bosom "which the infant embraces with its hands, presses with its lips, and watches with its eyes; and thus acquires more accurate ideas of the form than of the odor, and flavor, or warmth, which it perceives by its other senses. And hence in our maturer years, when any object of vision is presented to us, which, by its waving or spiral lines, bears any similitude to the form of the female bosom,—whether it be found in a landscape with soft gradations of rising and descending surface, or in the form of some antique vases, or in the works of the pencil or chisel,—we feel a general glow of delight which seems to influence all our senses; and if the object be not too large, we experience an attraction to embrace it with our arms, and to salute it with our lips, as we did in our early infancy the bosom of our mother."*

One of the happiest illustrations of ridicule being the test of truth, is the reply of Sheridan to this theory of Beauty. "I suppose," said he, "that the child brought up by hand, would feel all these emotions at the sight of a wooden spoon!"

SEVENTH EPOCH.

SECOND CRISIS: IDEALISM, SKEPTICISM, AND SENSATIONALISM PRODUCING THE REACTION OF COMMON SENSE.

CHAPTER I.

REID.

DUGALD STEWART opens his *Account of the Life and Writings of Thomas Reid* with remarking that the life was "uncommonly barren of those incidents which furnish materials for biography;" and as our space is scanty, we will content ourselves with a bare enumeration of such facts as may be useful for reference. Thomas Reid was born in 1710, at Strachan in Kincardineshire. He was educated at Marischal College, Aberdeen. In 1752 he occupied the chair of Moral Philosophy in Aberdeen. In 1764 appeared his *Inquiry into the Human Mind on the Principles of Common Sense*. "In 1763* the *Inquiry* received a still more substantial testimony of approbation from the University of Glasgow," in the offer of the chair of Moral Philosophy, vacant by the resignation of Adam Smith. In 1780 Reid resigned his office, and passed the remaining years of his life in retirement and study. In 1785 appeared his *Essays on the Intellectual Powers*. He died in Glasgow in 1796, having survived four of his children.

* We follow Stewart; but there must be some error here. If the *Inquiry* was not published till 1764, Reid could not in 1763 have been offered the chair at Glasgow as a "testimony of approbation."

Reid's philosophy made a great stir at first, but has for some years past been sinking into merited neglect. The appeal to Common Sense as arbiter in Philosophy, is now pretty well understood to be on a par with Dr. Johnson's kicking a stone as a refutation of Berkeley. Indeed Dugald Stewart himself was fully alive to the inconsequence of such an argument, and endeavored to shield his master by saying that the phrases "Common Sense" and "Instinct" were unhappily chosen. Unfortunately they were not mere phrases with Reid; they were principles. It is impossible to read the *Inquiry* and not see that Reid took his stand upon Common Sense;* and Beattie and Oswald, his immediate disciples, are still more open to the charge.

It would carry us to great lengths if we were to examine all the questionable tenets contained in the Philosophy of Common Sense. We cannot however pass the supposed triumph over Locke, who said that personal identity consists in Consciousness; "that is," continues Reid, "if you are conscious you did such a thing ■ twelvemonth ago, this consciousness of what is past can signify nothing else but the remembrance that I did it; so Locke's principle must be, that Identity consists in remembrance; and, consequently, a man must lose his personal identity with regard to every thing he forgets." Here Locke is altogether misstated. Consciousness does not resolve itself into any single act of memory, as Reid would here have us believe, nor can personal identity be limited to any one act. I have the consciousness of ■ certain mental state, therewith is connected the remembrance of some anterior state, which was also connected with an anterior state, and so on. The chain is made up of many links, and although some of these may be out of sight, not one is broken. I am connected with my boyhood by a regular series of transmitted acts of consciousness. I may have forgotten

* "I despise Philosophy, and renounce its guidance: let my soul dwell with Common Sense." (*Inquiry*, ch. i. § 3.) Let it be observed in passing, that by Reid's disciples the *Inquiry* is always regarded as his best work; the *Essays* were written in old age.

a thousand things, but I have not forgotten myself: if *one* act performed yesterday is forgotten to-day, *all* are not forgotten: and to remember one, however indistinctly, is sufficient to keep up the continuity of consciousness. Let those who fancy the sentiment of personal identity does not consist in the consciousness of personal identity, show us in what it does consist.

We come now to Reid's great achievement, that upon which he declared his philosophical fame to rest: the refutation of Berkeley and Hume by the refutation of the Ideal theory. This he considered as his contribution to philosophy; this has been made the monument of his glory. It appears to us, after a long acquaintance with his writings, and a careful perusal of what his critics and admirers have advanced, that his sole merit in this respect is that of having called attention to some abuses of language, and to some examples of metaphors mistaken for facts. How much confusion the word "idea" has always created need scarcely be alluded to; and any attempt to destroy the acceptance of the word as tantamount to *image*, must be welcomed as salutary. So far let us be grateful to Reid. Locke's use of the word "idea" as signifying "a thought" instead of an "image," has misled thousands. But whatever abuses may have crept in with the use of the word *idea*, it seems to us quite clear that Berkeley and Hume are not to be refuted by refuting the hypothesis of ideas, as Reid and his school suppose.

Let us, to avoid useless discussion, take it for granted that philosophers did adopt the theory of ideas which Reid combats; let us also grant that Reid has overturned that theory. What advance is made towards a solution of the problem? Not one step. The dilemma into which Hume threw Philosophy remains the same as ever. As I cannot transcend the sphere of my Consciousness, I can never know things except as they act upon me—as they affect my Consciousness. In other words, a knowledge of an external world otherwise than as it appears to my Sense, which transforms and distorts it, is impossible.

This proposition may be said to form the ground of Skepti-

cism. Now, we ask, how is that proposition affected by overthrowing the ideal theory? What does it signify whether the "affections of my consciousness" be regarded as "images" or not? They do not remain less purely *subjective* which ever way we regard them. They are changes *in me*. The main position of Skepticism is precisely this subjectivity of knowledge. Because we cannot transcend consciousness, we can never know things *per se*. Reid acknowledges that we cannot know things *per se*; but he says that we must believe in them, because in what we do know their existence is *suggested*. This is exactly the opinion of Locke; nay more, it is the doctrine of Hume: for he says that we do believe in an external world, though we have no good reason for doing so. Sir J. Mackintosh relates, that he once observed to Dr. Thomas Brown that he thought Reid and Hume differed more in words than opinions: Brown answered, "Yes, Reid bawled out we must believe in an outward world; but added, in a whisper, we can give no reason for our belief. Hume cries out we can give no reason for such a notion; and whispers, I own we cannot get rid of it."

Reid ought to have seen that his refutation of the ideal theory left Idealism and Skepticism untouched;* for either doctrine it matters little *how* the knowledge be acquired, so that it be entirely subjective. The argument brought forward by Dugald Stewart—that the belief in the existence of an external world is one of the Fundamental Laws of Human Belief—is more philosophical; but when he says that Berkeley's Idealism was owing to the unhappy and unphilosophical attempt of Descartes to prove the existence of the world, he forgets that Idealism was known in the ancient schools long before any one thought of proving the existence of matter. Moreover, although Stewart's formula is not open to the same objections as Reid's, yet it leaves the vital question untouched.

No one doubts that we believe in the existence of an external

* In fact, Malebranche's Idealism, which is very similar to Berkeley's, is founded on a theory of Perception almost identical with Reid's.

world. Idealism never questions the fact. The only doubt is, whether that belief be objectively as well as subjectively true. To say that the belief in objective existence is a Fundamental Law, is simply saying that *we are so constituted* that we are forced to attribute external reality to our sensations. As well say we are so constituted that fire applied to our bodies will give us pain. *We are so constituted.* What then? Does this advance us one step? Not one. We have still to seek some proof of the *laws of our constitution* being the measure of the *laws of other existences*—still to seek how what is true of the subjective must necessarily be true of the objective.

Thus, granting to Stewart all he claims, we see that he does not attain to the heart of the question; and, strictly speaking, he does not touch Berkeley at all; he only touches Hume. For what answer can it be to Berkeley, to say that our Belief in matter is a Fundamental Law, not to be questioned? Berkeley would reply: "Exactly; I said as much. I said that men believed their senses, and believed that what they saw was *out of* them. This is the law of human nature: God has so ordained it. But that which men do *not* believe, is the existence of an occult substance, an imaginary world lying underneath all appearances. You do not mean to assert that the belief in this substance is a Fundamental Law? If you do, you must be mad." Stewart's answer is thus shown to be quite *beside* the mark.

Reid constantly declares that no reason can be given for our belief; it must be referred to an original instinctive principle of our constitution, implanted in us for that express purpose. If this be so, we ask, upon what pretence does Reid claim the merit of having refuted Idealism and Skepticism by refuting the 'ideal hypothesis? If *instinct* and not *reason* is to settle the question, then has the *ideal hypothesis* nothing to do with it; if the refutation of the ideal hypothesis sufficed, then has instinct nothing to do with it. "To talk of Dr. Reid," said the *Quarterly*, in its review of Stewart's Second Dissertation, "as if his writings had opposed a barrier to the prevalence of Skeptical

philosophy, is an evident mistake. Dr. Reid successfully refuted the principles by which Berkeley and Hume endeavored to establish their conclusions; but the conclusions themselves he himself adopted as the very premises from which he reasons. The impossibility of proving the existence of a material world from 'reason, or experience, or instruction, or habit, or any other principle hitherto known to philosophers,' is the argument and the *only* argument by which he endeavors to force upon us his theory of instinctive principles."

It appears, then, that inasmuch as Reid declares *instinct* to be the *only* principle upon which we can found our belief in an external world, his argument against Berkeley is trebly vicious. First, because the *belief* was never questioned; secondly, because although we must *act* according to our instincts, such a necessity is no proof that our *beliefs are true*; thirdly, because if instinct, and not reason, is to be the arbiter, the attack on the ideal hypothesis is utterly beside the question.

Thus we see that, granting to Reid the glory he claims of having destroyed the ideal hypothesis, he has only destroyed an outpost, fancying it to be the fortress. A few words on his own theory of perception may not be out of place here.

He justly enough declared the ideal hypothesis to be gratuitous. We have no reason for supposing that the mind perceives images of things instead of the things themselves. But he overlooks, or rather denies, the fact that we perceive things *mediately*; he says we perceive them *immediately*. His explanations are contradictory and confused, but he repeats the assertion so often, that there can be no doubt he meant to say we perceive things immediately: the mind stands face to face with the thing, and perceives it immediately, without any medium of ideas, images, eidola, or the like. In this we believe him utterly in the wrong; his battle against "ideas" carried him too far. It is one thing to say that *we are affected by the things*, and not by *images* of things; and another thing to say that we *perceive things immediately*. The former is correct; the latter is in direct contra-

diction with all we know of perception; and Reid constantly contradicts himself on the point.

"When I attend," he says, "as carefully as I can to what passes in my mind, it appears evident that the *very thing* I saw yesterday, and the fragrance I smelled, are now the *immediate objects* of my mind when I remember it. . . . Upon the strictest attention, memory appears to me to have the things that are past, and not present ideas for its objects."

This is his position against the ideal hypothesis, which assumes that nothing is perceived but what is in the mind which perceives it; that we do not really perceive things which are external, but only certain images and pictures of them imprinted on the mind. The position is untenable. The *very thing*, the rose, of which he thinks, is not an *immediate object* at all: it is elsewhere. The fragrance cannot even be recalled; that is to say, cannot be *felt* again, but only *thought*. All we can remember is the fact of having been affected by the rose in a certain manner: that affection we call fragrance; we cannot recall the affection. Reid could hardly, therefore, have meant what his words literally express. Perhaps he meant, that when we think of the rose and the fragrance, the object of which we think is the rose, not an idea of the rose. But what a truism! He says, that "in memory the *things* that are past, and not present *ideas*, are the objects of the mind." This is either a needless truism or a falsism. Let us alter the sentence thus—"In memory the *things thought of* are not themselves present to the mind, but the *thoughts* only are present to it." Reid would not dispute this—could not dispute it: yet it is only a more guarded statement of the ideal hypothesis; it substitutes "thoughts" for "ideas." He was misled by the ambiguity of the word "object," which he uses as if meaning simply what the mind is thinking of; and of course the mind thinks of the thing, and not of the idea. But the ideal hypothesis takes "object" to be that which is *immediately present to*—face to face—with the mind, viz., an idea, or thought; and of course the mind thinks *by* its thoughts:

it may think *about the thing*, but it is *through the medium of thought*.

The difference is this:—The Idealist says, that when things affect us, our sensations are what we perceive, and not the things producing those sensations. Reid says, we feel our sensations, but therewith also we perceive the things. The Idealist further says, that when we think of things, the immediate object face to face with the mind is not a thing but an idea (thought). Reid says the object is the *very thing*: which is either an absurdity, or else does not differ from the ideal hypothesis.

We are quite ready to admit that the pretended separation of thoughts from thinking, and the making thoughts ‘objects,’ is vicious; and therefore Reid’s language is perhaps less objectionable. But we must confess that we see no other advantage he gains over his adversaries. He does not pretend that our sensations are at all *like* their causes; nay, he fancies that he destroys the ideal hypothesis by insisting on the want of resemblance between matter and our sensations. He says, over and over again, that the external world is in no respect like our sensations of it. “Indeed, no man can conceive any sensation to resemble any known quality of bodies. Nor can any man show, by any good argument, that all our sensations might not have been as they are, though no body, nor quality of body, had ever existed.”* This granted, the question arises, How do you know any thing of the external world? Reid answers, “It is owing to an original instinct implanted in us for that purpose.” Push the question further, drive him into a corner, and bid him tell you what that instinct enables you to know of matter, and he will answer, “In sensation there is suggested to us a cause of that sensation in the quality of a body capable of producing it. This is Locke’s view.

The great point in Reid’s theory is, that with our sensations are joined perceptions. “The senses have a double province,” he

* *Inquiry*, ch. v. § 2.

says; "they furnish us with a variety of sensations, some pleasant, others painful, and others indifferent; at the same time they give us a conception, and an invincible belief of the existence of external objects. This conception and belief, which nature produces by means of the senses, we call *perception*."* This, upon which so much stress is laid that philosophers are said to have been always in error because they overlooked it, we regard as a remarkable instance of Reid's want of subtlety. Neither Berkeley nor Hume denied the fact of our belief in the externality of the causes of sensations: Berkeley denied that these causes had an occult substratum; Hume denied that any reason could be given for our belief in their externality. What force then has "Perception?" It is nothing more than that "belief," according to Reid; though to call perception a belief is, to say the least, a somewhat inaccurate use of language. But grant all he wishes, and you grant that with our sensations there is an accompanying belief in the existence of an external cause of those sensations. Berkeley would answer, "Very true; but that cause is not unthinking matter." Hume would answer, "Very true; but we can give no reason for our belief; we can know nothing of the cause." Reid can only retort, "Perception is belief:" a retort which has been deemed satisfactory by his school; which really is only an abuse of language; and which moreover has the further disadvantage of being available only as an argument against Hume; for against Berkeley it is powerless. If perception is belief, and we perceive an external world, Hume may be answered when he says we have no grounds for our belief. But Berkeley is not answered. He says that we *do* believe in an external world; but that world is not a world of unthinking matter—it is a world of divine agency. Reid would not pretend that in sensation or perception we can distinguish the *nature* of the causes which affect us; he constantly tells us that we cannot know *what* those causes are, but only *that* there are causes.

* *Essays on Intellectual Powers*, ii. ch. xvii.

As long as the *noumenal* world is removed from our inspection, so long must Berkeley remain unrefuted by any theory of perception. The error of his system, as we endeavored to show, is in the gratuitousness of his assumption with respect to the immediate agency of the Deity.

Reid says, that if we grant Berkeley's premise—viz. "we can have no conception of any material thing which is not like some sensation in our minds"—then are the conclusions of Idealism and Skepticism unanswerable. This premise therefore he disputes. Now attend to his challenge:—"This I would therefore humbly propose, as an *experimentum crucis*, by which the ideal system must stand or fall; and it brings the matter to a short issue: Extension, figure, and motion may, any one or all of them, be taken for the subject of this experiment. Either they are ideas of sensation, or they are not. If any one of them can be shown to be an idea of sensation, or to have the least resemblance to any sensation, I lay my hand upon my mouth and give up all pretence to reconcile reason to common sense in this matter, and must suffer the ideal skepticism to triumph."* It was not till after repeated perusals that we caught the significance of this passage; and are not *quite* positive that we have understood it now. To admit it to have any force at all, we must understand "ideas of sensation" as "*images* of sensation." Certainly, extension is no copy of any one sensation. But if Reid means to say that the idea of extension is not the result of complex sensations which a body excites in us—if he means to say that the idea of extension is not an abstract idea by which we express a certain property of bodies, a property known to us only through sensation—then must we cease all dispute, and leave him in possession of his wonderful discovery.

Reid's theory of perception may be thus stated:—External objects occasion certain sensations in us; with these sensations we perceive the existence of certain qualities capable of producing

* *Inquiry*, ch. v. § 7.

them: these he distinguishes into primary and secondary. The primary, he says, we perceive *immediately*; the second, *mediately*.

And this is the theory by which, with the aid of an "original instinct" (some instincts then are acquired?), he is supposed to have refuted Idealism. Any one may see that Berkeley might readily have relinquished his ideal hypothesis, and accepted Reid's, with perfect security for Idealism. The "unknown causes," which Reid calls "qualities," Berkeley calls "divine laws." The difference is merely nominal.

This much with respect to Idealism. With respect to Hume, the theory is almost as harmless. Hume would say, "All that is given in sensation is sensation; your "perception" (which you call belief) of qualities amounts to nothing more than a *supposition*—a necessary one, I admit; but I have always said that our belief in external causes of sensation was an *irresistible prejudice*; and my argument is, that we have nothing but the prejudice as a proof—reason, we have none."

Finally, with respect to Locke, it will in the first place be seen that Reid's solution is neither more nor less than that given by Locke; in the second place, the boasted refutation of the ideal hypothesis is always supposed by Reid's school to be a refutation of Locke's view of the origin of knowledge; and this is a very great mistake. Because Berkeley and Hume pushed Locke's system to conclusions from which he wisely shrank, it has been generally supposed that his account of the origin of our knowledge is indissolubly bound up with the ideal hypothesis, by it to stand or fall. This probably is the meaning of the vulgar error that Locke's view of knowledge leads to atheism. It led to Hume. In disproof of Reid's supposition we answer, firstly, Idealism is not indissolubly bound up with the ideal hypothesis, although Berkeley may have adopted that hypothesis; secondly, Locke's system is altogether independent of the hypothesis, and in his Review of the doctrines of Malebranche he very distinctly and emphatically denies it. The force of this observation will better be appreciated when it is remembered that although

Locke's language is notoriously unguarded and wavering, all his reasonings are founded on the use of the word "ideas" as synonymous with "notions" or thoughts."

In conclusion, although we think it has been shown that the Common-Sense Philosophy egregiously failed in answering Berkeley and Hume, it was not without service by directing the attention of mankind more exclusively to Psychology. The phrases so complacently used by Dugald Stewart to express the nature of his inquiries, namely "inductive metaphysics" and "experimental philosophy of the mind," are perhaps objectionable; but few will deny the value of his *Elements*, and of Brown's *Lectures*, works so popular as to need no further mention here. The *Analysis of the Mind*, by the late James Mill, which may be regarded as the development of Hartley's doctrine, stripped of its physical hypothesis, is less known; but it is a work of great value, and would long ago have been as popular had it been written in a more engaging manner. No one interested in these inquiries should omit studying it.*

The philosophy of the Scotch School was a protest against Skepticism. It failed; but another protest was made in Germany, and on philosophical principles. That also failed, but in another way; and the attempt was altogether more worthy of Philosophy. The reader foresees that we allude to Kant.

* Since the first edition of this work, Sir W. Hamilton has published an edition of Reid, illustrated and enriched by notes and dissertations of incomparable erudition and acuteness. Respecting the interpretation Sir William gives to Reid's doctrines, I will only say that he has shown what a subtle mind can read into the philosophy of common sense; but he has not in the least produced the conviction in me of Reid's having meant what the illustrious successor supposed him to have meant. At the same time I will add that the limits of my work having restricted me to the consideration of Reid's contributions to Philosophy (in the narrow sense of the term), I have not done justice to his many excellent qualities as a teacher. His works are well worthy of diligent study, and their spirit is eminently scientific.

EIGHTH EPOCH.

RECURRENCE TO THE FUNDAMENTAL QUESTION RESPECTING THE ORIGIN OF KNOWLEDGE.

CHAPTER I.

KANT.

§ I. LIFE OF KANT.

IMMANUEL KANT was born at Königsberg, in Prussia, 22d April, 1724. His family was originally Scotch, a circumstance which, when taken in conjunction with his philosophical connection with Hume, has some little interest. His father was a saddler, a man of tried integrity. His mother was somewhat severe, but upright, speaking the truth, and exacting it. Kant was early bred in a love of truth, and had before him such examples of moral worth as must materially have contributed to form his own inflexible principles.

Madame de Staël has remarked, that there is scarcely another example, except in Grecian history, of a life so rigorously philosophical as that of Kant. He lived to a great age, and never once quitted the snows of murky Königsberg. There he passed a calm and happy existence, meditating, professing, and writing. He had mastered all the sciences; he had studied languages, and cultivated literature. He lived and died a type of the German Professor: he rose, smoked, drank his coffee, wrote, lectured, took his daily walk always at precisely the same hour. The cathedral clock, it was said, was not more punctual in its movements than Immanuel Kant.*

* He mentions having once been kept two or three days from his promenade by reading Rousseau's *Emile*, which had just appeared.

He was early sent to the University. There he began and there he ended his career. Mathematics and physics principally occupied his attention at first; and the success with which he pursued these studies soon manifested itself in various publications. He predicted the existence of the planet Uranus; and Herschel himself, after discovering it, admitted Kant's having first announced it.

But none of these publications attracted much attention till the renown of his *Critique of Pure Reason* had made every thing produced by him a matter of interest. Nor did the *Critique* itself attract notice at first. The novelty of its views, the repulsiveness of its terminology and style, for some time obscured its real value. This value was at length discovered and made known. All Germany rang with praises of the new philosophy. Almost every "chair" was filled by a Kantist. Numberless books, and not a few pamphlets, came rapidly from the press, either attacking or defending the principles of the Critical Philosophy. Kant had likened himself to Copernicus. The disciples likened him both to Copernicus and Newton; for he had not only changed the whole science of Metaphysics, as Copernicus had changed the science of Astronomy, but had also consummated the science he originated.

The *Critique* was, he tells us, the product of twelve years' meditation. It was written in less than five months. These two facts sufficiently explain the defects of its composition. In his long meditations he had elaborated his system, divided and subdivided it, and completed its heavy and useless terminology. In the rapidity of composition he had no time for the graces of style, nor for that all-important clearness of structure which (depending as it does upon the due gradation of the parts, and upon the clearness with which the parts themselves are conceived) may be regarded as the great desideratum of a philosophical style.

But in spite of these defects—defects which would have been pardoned by no public but a German public—the *Critique* be-

came celebrated, and its author had to endure the penalty of celebrity. He was pestered with numerous calls of curious strangers, who would not leave Königsberg without having seen him. To the curious were added the admiring. Enthusiastic scholars undertook long journeys to see their great master. Professor Reuss one day walked into his study, saying brusquely that "he had travelled a hundred and sixty miles to see and speak with Kant." The visits became so numerous, that in the latter part of his life he contented himself with merely showing himself at the door of his study for a few minutes.

Kant never spoke of his own system, and from his house the subject was entirely banished. He scarcely read any of the attacks on his works: he had enough of Philosophy in his study and lecture-room, and was glad to escape from it to the topics of the day.

He died on the 12th of February, 1804, in the eightieth year of his age, retaining his powers almost to the last. He latterly, during his illness, talked much of his approaching end. "I do not fear death," he said, "for I know how to die. I assure you that if I knew this night was to be my last, I would raise my hands and say, 'God be praised!' The case would be far different if I had ever caused the misery of any of his creatures."

For a picture of Kant's daily habits, and many interesting traits of his character, the reader will do well to look at De Quincey's "Last Days of Immanuel Kant," in the third volume of his *Miscellanies*. I cannot find space for such details; nor for more than a passing mention of Kant's relation to Swedenborg, of which such unjustifiable use is often made by the admirers of the latter, who proclaim, with emphasis, that Kant testified to the truth of Swedenborg's *clairvoyance*. He did nothing of the kind. In his *Letter on Swedenborg** he narrates two of the *reported* cases of Swedenborg's *clairvoyance*, and says

* *Kleine Anthropologische Schriften* (Theil vii. p. 5, of Rosenkrantz and Schubert's ed.).

he knows not how to disprove them, they being supported by such respectable testimony; but he nowhere testifies to them himself; and in the *Anthropologie*, §§ 35 and 37,* his energetic contempt for Swedenborgianism and all other *Schwärmerei* is unequivocally expressed.

§ II. KANT'S HISTORICAL POSITION.

There is a notion, somewhat widely spread through England, that Kant was a "dreamer." He is regarded as a sort of Mystic; and the epithet "*transcendental*" is made to express the superb contempt which common sense feels for the vagaries of philosophers. The "dreams of the Kantian philosophy," and "transcendental nonsense," are phrases which, once popular, now less so, are still occasionally to be met with in quarters where one little expects to find them.

We are bound to say that, whatever the errors of Kantism, "dreaminess" or "mysticism" are the last qualities to be predicated of it. If its terminology render it somewhat obscure and repulsive, no sooner is the language comprehended, than all obscurity falls away, and a system of philosophy is revealed, which for rigor, clearness, and, above all, intelligibility, surpasses by many degrees systems hitherto considered easy enough of comprehension.

Convinced that the system of Kant is plainly intelligible, and finding that neither Kant himself, nor the generality of his expositors, have succeeded in overcoming the repulsiveness of neologisms and a cumbrous terminology,† our task must obviously

* *Kleine Anthropologische Schriften*, zweite Abtheil. p. 89 sq.

† Since this was written, we have read the work of Victor Cousin, *Leçons sur Kant*, vol. i. Paris, 1842. (Translated into English by Mr. Henderson, London, 1854.) It is not only one of the best expositions we have seen; it is also the most intelligible. The chapter on Kant in M. Barchou de Penhoen's useful work, *Histoire de la Philos. Allemande depuis Leibnitz jusqu'à Hegel*, 2 vols. Paris, 1836, may also be read with advantage; though incomplete, it is intelligible. Also Morell's *History of Speculative Philos. in the Nineteenth Century*. Readers of German will do well to read Chalybäus's *Historische Entwicklung der Speculativen Philos. von Kant bis Hegel* (Dres-

be to give an exposition of the system, as far as possible, in ordinary philosophical language; and, by exhibiting the historical position which it occupies, connect with it speculations already familiar to the reader.

From Spinoza to Kant the great question had been this:—*Have we, or have we not, any Ideas which can be called necessarily, absolutely true?* A question which resolved itself into this: *Have we, or have we not, any Ideas independent of Experience?*

The answer given by the majority of thinkers was, that we had no ideas independent of Experience; and Hume had shown that Experience itself was utterly incompetent to assure us of any truth not simply relative.

Experience irresistibly led to Skepticism. The dilemma, therefore, which we signalized in the First Crisis of modern Philosophy, again presented itself: Spinozism or Skepticism? The labors of so many thinkers had only brought the question round to its starting-point. But Spinozism was alarming—Skepticism scarcely less so. Before submitting to be gored by either horn of the dilemma, men looked about to see if there was no escape possible. A temporary refuge was found by the Scotch School in Common Sense, and by Kant in *Criticism*.

Kant called his system the *Critical Philosophy*. His object was to examine into the nature of this Experience which led to Skepticism. While men were agreed that Experience was the source of all knowledge, Kant asked himself, What is this Experience?—What are its Elements?

The problem he set himself to solve was but a new aspect of

den, 1843). (It has been twice translated into English: by Mr. Tulk and by Mr. Edersheim.) Michelet's *Geschichte der letzten Systeme der Philos. in Deutschland von Kant bis Hegel* (Berlin, 1837), is a learned and valuable work, but can be read only by the initiated. More generally useful than any of these is the *Hist. de la Philos. Allemande depuis Kant jusqu'à Hegel*, by J. Wilm, Paris, 1856. Kant's *Critique of Pure Reason* has been translated by Mr. Meiklejohn (*Bohn's Philosophical Library*, 1855) with so much accuracy and ability that the translation may be read with entire confidence which can rarely be said of translations from the German.

the problem of Locke's *Essay*. On this deep and intricate question of human knowledge two opposite parties had been formed—the one declaring that all our knowledge was given in Experience, and that all the materials were derived from Sensation, and Reflection upon those materials; the other declaring that Sensation only furnished a portion of our Experience. This second party maintained that there were Elements of knowledge which not only were never derived from Sensation, but which absolutely *transcended* all sensation. Such, for instance, is the idea of Substance. Experience only informs us of *qualities*: to these qualities we add a substratum which we call Substance; and this idea of a substratum, which we are *compelled* to add, Locke himself confesses we never gained through any sensation of matter. Other ideas, such as Causality, Infinity, Eternity, etc., are also independent of Experience: *ergo*, says this school, antecedent to it.

In the course of inquiry, the untenableness of the theory of innate ideas had become apparent. Descartes himself, when closely pressed by his adversaries, gave it up. Still the fact of our possessing ideas apparently *not* derivable from experience, remained; and this fact was to be explained. To explain it, Leibnitz asserted that although all knowledge *begins with* Sensation, it is not all *derived from* Sensation; the mind furnishes its quota; and what it furnishes has the character of universality, necessity, consequently of truth, stamped on it. This doctrine, slightly modified, is popularly known as the doctrine of “original instincts”—of “Fundamental Laws of Belief.”

Kant also recognized the fact insisted on by the adversaries of the Sensational School; and this fact he set himself carefully to examine. His first object was therefore a Criticism of the operations of the mind.

Kant considered that his conception of a purely critical philosophy was entirely original.* No one before him had thought

* And Sir W. Hamilton repeats the statement: *Discussions*, p. 15.

of thus subjecting Reason itself to a thoroughly critical investigation, in order to reach answers to such questions as : Are *à priori* synthetic judgments possible ? Is a science of Metaphysics possible ? Certainly no one had isolated the *à priori* elements of knowledge from those given in Experience, as Kant isolated them, to build a system thereon ; but the whole tendency of speculative development since Hobbes, had been, as we have seen, towards the investigation of the grounds of certitude.

On interrogating his Consciousness, Kant found that neither of the two ordinary explanations would account for the phenomena : the abstract Ideas we have, such as Time, Space, Causality, etc., could not be resolved into Experience alone : nor, on the other hand, although *à priori*, could they be supposed absolutely *independent* of Experience, since they are, as it were, only the *forms* (necessary conditions) of our Experience.

There are not *two* sources of Knowledge, said he : on the one side, external objects, and on the other, human understanding. Knowledge has but *one* source, and that is the *union* of object and subject. Thus, water is the union of oxygen and hydrogen ; but you cannot say that water has two causes, oxygen and hydrogen ; it has only one cause, namely, the union of the two.

In this conception the existence of two distinct factors is assumed. "That all our knowledge begins with Experience," he says, "there can be no doubt. For how is it possible that the faculty of cognition should be awakened into exercise otherwise than by means of objects which affect our senses, and partly of themselves produce representations (*Vorstellungen*), partly rouse our powers of understanding into activity, to compare, to connect, or to separate these, and so to convert the raw material of our sensuous impressions into a knowledge of objects which is called Experience ? In respect of time, therefore, no knowledge of ours is antecedent to Experience, but begins with it. But although all our knowledge begins with Experience, it by no means follows that all arises out of Experience. For, on the con-

trary, it is quite possible that our empirical knowledge (*Erfahrungserkenntniss*) is a compound of that which we receive through impressions, and that which the faculty of cognition supplies from itself (sensuous impressions giving merely the *occasion*), an addition which we cannot distinguish from the original element given by sense, till long practice has made us attentive to and skilful in separating it. It is therefore a question which requires close investigation, and is not to be answered at first sight—whether there exists a knowledge altogether independent of Experience, and even of all sensuous impressions.”*

To investigate this is the purpose of Criticism.

The whole world is to us a series of Phenomena. Are these Appearances the *production of the Mind* to which they appear; or are they the pure *presentation* of the things themselves? Idealism or Realism? Neither; yet both. The Mind and the object *co-operating* produce the Appearance or sensuous impression. In their union Perception is effectuated.

The Mind has certain materials furnished it, and on these materials it imposes certain forms or conditions of its own. These forms alone make perception possible, since they constitute the modes of the mind's operation. If we had only sensations—that is, supposing objects acted upon us, and *we did not also act upon them*—the result would be no more than that of the wind playing on the Æolian harp; Experience would be impossible. To make Experience possible, the mind must grasp objects in a synthesis of the objects and the forms of the perceptive power.

Kant's Criticism was directed against Locke on the one hand, in establishing that we *have* ideas independent of Experience; and against Hume on the other, in establishing that these ideas have a character of universality, necessity, and irresistibility. But—and the point is important—his Criticism proved that these ideas, although universal and certain, could not be called *absolutely* true: they were only *subjectively* true. This was fall-

* *Kritik, Einleitung* (Translation, p. 1).

ing back into Hume's position ; since although Hume called belief in causality the effect of habit, and Kant called it a law of the mind, yet both agreed in denying to it any *objective* truth ; both agreed that a knowledge of things *per se* was impossible.

We regard the result of Kant's investigation of the elements of Thought as nothing less than a scientific basis for Skepticism. He likens his philosophical reform to the reform introduced into Astronomy by Copernicus.* Finding the labors of men unsatisfactory, Copernicus bethought him that perhaps success might crown his efforts if he shifted his ground, if, instead of assuming that the sun turned round the earth, he were to assume that the earth turned round the sun. So Kant says, that the ordinary assumption of our knowledge following the order of external objects seemed to him better if reversed, and if we were to assume that the objects obeyed the laws of our mental constitution. And he calls his system critical, because it is founded on an examination of our cognitive faculties. Both the name and the comparison appear to us erroneous. An examination of the cognitive faculties was, as we have often said, the great topic of philosophical speculation, and although the examination of Kant differed somewhat from every other in result, it in nowise differed in method. Copernicus positively changed the point of view. Kant did nothing of the kind : his attempt to deduce the laws of the phenomenal world from the laws of mind, was little more than the attempt of Descartes to deduce the world from Consciousness ; it is the same as the attempts of Leibnitz and Berkeley in method ; and the *result* is very much the result obtained by Hume, namely, that we can know nothing but our own ideas, we can never know things *per se*. Kant, after analyzing the operations of the mind, discovered indeed certain principles of certitude ; but he admitted that those principles could not be applied to things *beyond* the Mind ; and that all within the sphere of our cognition was no more than phenomenal. He re-

* See the celebrated second Preface to the *Kritik*.

views his investigation, and then, declaring that he has gone the round of the domain of human Understanding and measured it exactly, he is still forced to admit that that domain is only an island. Nature has assigned to it invariable limits. It is the empire of Truth; but it is surrounded by a stormy and illimitable sea, upon which we discover nothing but illusions. There, on that sea, the navigator, deceived by masses of ice which appear and disappear successively before him, believing that at every moment he is about to discover land, wanders without repose, guided only by one hope; he is the plaything of the stormy waves, always forming new plans, always preparing himself for new experiences, which he cannot renounce, and yet which he can never obtain.*

To the Skeptic Kant says, "No: experience is not a deceit; human Understanding has its fixed laws, and those laws are true."

To the Dogmatist he says, "But this Understanding can never know Things *per se*. It is occupied solely with its own Ideas. It perceives only the Appearances of Things. How would it be possible to know Noumena? By stripping them of the *forms* which our Sensibility and Understanding have impressed upon them (*i. e.* by making them cease to be Appearances). But to strip them of these forms, we must annihilate Consciousness—we must substitute for our Sensibility and Understanding, a faculty, or faculties, capable of perceiving Things *per se*. This, it is obvious, we cannot do. Our only means of communication with objects are precisely this Sensibility and this Understanding, which give to objects the forms under which we know them."

To the Dogmatist, therefore, Kant's reply is virtually the same as Hume's. He proves that the Understanding, from the very nature of its constitution, cannot know Things *per se*. The question then arises, Have we any other Faculty capable of knowing Things *per se*? The answer is decisive, We have no such Faculty.

* *Kritik*, b. i. cap. iii.

The difference between Hume and Kant, when deeply considered, is this: Hume said that the Understanding was treacherous, and, as such, it rendered Philosophy impossible. Kant said that the Understanding was not treacherous, but limited; it was to be trusted as far as it went, but it *could* not go far enough; it was so circumscribed, that Philosophy was impossible.

This difference, slight as it may appear, led to important differences in the application of Kant's principles. The mendacity of Consciousness maintained by Hume, led him to utter Skepticism in Philosophy and in Religion, as subjects on which reason could not pronounce. The veracity of Consciousness (as far as it went) maintained by Kant, was a firm and certain basis, though a limited one, on which to build Religion and Morals, as we shall see hereafter. Kant's critics do not in general appear to be aware of the consequences resulting from his exposition of the veracity of the Understanding. Yet, as the battle was confessedly between him and Hume, it might have been suspected that he would not have left the field entirely to his antagonist.

The reader is, we trust, now prepared to follow with interest the leading points of Kant's analysis of the mind. In giving an indication of the *result* of that analysis, before giving the analysis itself, we hope to have so far interested the reader, that he will read the analysis with sharpened attention; seeing whither dry details are leading, he will not deem them dry.

And first of the famous question: *How are synthetic judgments, à priori, possible?* This is the nut Kant has to crack with Hume. But first let us understand Kant's language. He divides all our judgments into two classes, analytic and synthetic. The analytic judgment is, as it were, but *a writing out* of our experience. When we say that a triangle is a figure with three sides, or that a body is extended, we are judging analytically; *i. e.* we are adding nothing to our conception of body or triangle, we are only analyzing it. The synthetic judgment, on the contrary, is when we predicate some attribute of a thing, the conception of

which does not involve that attribute: such as that a straight line is the shortest road between two points.

There are two classes of synthetic judgments: those *à posteriori* and those *à priori*. The former result from experience: *e. g.* gold is ductile. We must absolutely know that gold is ductile, before we can predicate ductility of gold. But the *à priori* judgments are independent of experience: *e. g.* a straight line is the shortest road between two points; which experience may *confirm*, but which is recognized as true, independent of experience; above all, it has a character of universality which experience could not bestow; for though experience may show us how a straight line is, in many instances, the shortest road between two points, it cannot prove that there is, absolutely, no shorter road in any case.

Hume declared that our experience of Cause and Effect was simply an experience of antecedence and sequence; and that our attributing a cause to any effect was a mere matter of habit.

True, replied Kant, in the fact of antecedence and sequence, causation is not given; but inasmuch as causation is irresistibly believed in, the idea must have some source. If it is not given in the things observed, then must we seek it in the observer. In this fact of causation what have we? We have first antecedence and sequence; we have next an attribute of causation predicated of them. The first is given in our experience; the second is not given in our experience, but is independent of it. This second is therefore an *à priori* synthetic judgment. "It must either have an *à priori* basis in the understanding, or be rejected as a chimera. For it demands that something, A, should be of such a nature that something else, B, should follow from it necessarily, and according to an absolutely universal law. We may certainly collect from phenomena a law, according to which this or that *usually* happens, but the element of necessity is not to be found in it. Hence it is evident, that to the synthesis of cause and effect belongs a dignity which is utterly wanting in any empirical synthesis; for it is no mere mechanical synthesis, by means

of addition, but a dynamical one; that is to say, the effect is not to be cogitated as merely annexed to the cause, but as posited by and through the cause, and resulting from it."* This, therefore, is an *à priori* judgment. By means of such judgments we are not only able to say that one thing is the cause of another, but also we are enabled to make this wide generalization: *Every effect must have a cause*. Here, as in the proposition of a straight line being the shortest road between two points, we have an idea not given in experience, and an idea, the universality of which, experience could never verify.

We are thus led to assert that the Mind does add something to sense-experience; and that what it adds is not only independent of experience, but has the further character of certitude and universality, which experience can never claim. The certainty of experience is always limited; it never can have the character of universality, however rich it may be; for after a thousand years it may be proved erroneous. Thus, it was universally believed that all crows were black: a wide experience had established it—yet white crows were found; and experience was forced to acknowledge it had been in error. So with the motion of the sun, once universally believed, because founded upon experience. That which is to be held as irresistibly true, which shall be universally and necessarily maintained by all men, cannot have its origin in Experience, but in the constitution of the Mind. Hence the truth of Mathematics; not, as is so often said, because it is an abstraction of Forms and Relations, but because it is founded on the necessary laws of our mental constitution.

In these synthetic judgments, *à priori*, there is a ground of Certitude. The veracity of human reason reposes on that Certitude. Although therefore, says Kant, we can never know whether our conceptions of things, *per se*, are *adequate*, we can know what conceptions all men must form of them; although

* *Kritik*, b. i c. ii. § 9 (Transl., p. 76).

we cannot know if our knowledge has any objective truth, we can be certain of its subjective truth.

A principle of Certitude having been found, nothing further was necessary for its confirmation than to ascertain in how far this principle could be the basis of a science. Kant showed that it formed the basis of all science. People do not dispute, said he, respecting Mathematics or Logic, or the higher branches of Physics; and if they do dispute, they end by agreeing. But in Metaphysics, disputes are endless. Why is this? Simply because Logic, Mathematics, and the higher branches of Physics are Sciences of Generalities; they do not occupy themselves with variable and contingent, but with the invariable and universal properties. Logic is composed of rules which are reducible to certain self-evident propositions. These propositions, reduced to their principles, are nothing more than the laws of the human mind. These laws are invariable because human nature is invariable. Mathematics is, in the same way, the study of certain invariable properties, which do not exist in nature, but which are conceptions of the mind, upon data furnished by nature, abstraction being made of all that is variable and uncertain in those data: *e. g.* the essential properties of an equilateral triangle, abstraction being made of any *body* which is triangular, and only the properties themselves being considered.

In physics, since the time of Galileo, men have seen that they are judges, not the passive disciples, of nature. They propose an *à priori* problem; and, to solve this problem, they investigate nature, they make experiments, and these experiments are directed by reason. It is reason that they follow, even when operating on nature; it is the principle of that reason which they seek in nature, and it is only in becoming rational that physics become a science. Again we find science reposing on the laws of the mind!

Thus, the laws which form the basis of logic, mathematics, and physics, are nothing less than the laws of the human mind. It is, therefore, in the nature of the human mind that the certi-

tude of all the sciences is to be found; and the principles of this certitude are universality and necessity.

Psychology thus becomes the groundwork of all Philosophy; to Kant's Psychology we now address ourselves.

§ III. KANT'S PSYCHOLOGY.

It has been shown that experience does not furnish the whole of our knowledge;

That what it does furnish has the character of contingency and variability;

That the mind also furnishes an element, which element is an inseparable condition of all knowledge; without it knowledge could not be;

That this element has the character of universality and necessity.

And that the principle of all certitude is precisely this universality and necessity.

It now remains for us to examine the nature of the mind, and to trace the distinctive characters of each element of knowledge, the objective and the subjective. Instead of saying, with the Sensational School, All our knowledge is derived from the senses, Kant said, *Half* of all our knowledge is derived from the senses: and the half which has another origin, is *indissolubly bound up with the former half*. Thus, instead of saying with the Cartesians, that, besides the ideas acquired through the sense, we have also certain ideas which are innate, and irrespective of sense; Kant said *all* our ideas have a double origin, and this twofold co-operation of object and subject is *indispensable* to all knowledge.

Let us clearly understand Kant's object. He calls his great work the *Critique of the Pure Reason*. It is an examination of the mind, with a view to detect its *à priori* principles. He calls these *pure* because they are *à priori*, because they are above and beyond experience. Having demonstrated that the mind has *some* pure principles—has some ideas which were never given in experience, and must therefore be *à priori*—he was led to inquire

how many the mind possessed. In his *Critique* therefore we are only to look for the exposition of *à priori* principles. He does not trouble himself with investigating the nature of perception; he contents himself with the fact that we have sensations, and with the fact that we have ideas whose origin is not sensuous.

The Non-ego and the Ego, the objective world and the subjective mind, being placed face to face, the two co-operate to produce knowledge. We are however here only concerned with the subject. What do we discover in it? First, a Sensibility—a power of being affected by objects; this is what Kant calls the *Receptivity* of the mind: it is entirely passive. By it the representations of objects (*i. e.* sensations) are received. Secondly, an understanding (*Verstand*)—a faculty of knowing objects by means of the representations furnished by our Sensibility: this is an *active* faculty; in antithesis to Sensibility, it is a *Spontaneity*.

But our Sensibility, although passive, has its laws or conditions; and, to discover these conditions, we must separate that which is diverse and multiple in our sensations from that which remains invariably the same. The objects are numerous and various; the subject remains invariable. Kant calls the multiple and diverse element by the name of *material*; the invariable element by the name of *form*. If therefore we would discover the primary conditions of our Sensibility, we must discover the invariable elements in all sensations.

There are two invariable elements—*Space* and *Time*. They are the forms of our Sensibility. Space is the form of our Sensibility, as external; Time the form both as internal and external.

Analyze sensations of external things as you will, you can never divest them of the form of Space. You cannot conceive bodies without Space; but you can conceive Space without bodies. If all matter were annihilated, you must still conceive Space to exist. Space therefore is the indispensable condition of sensation: the form of external Sensibility. It is not given

in the materials of sensation ; since you may conceive the objects annihilated, but cannot conceive the annihilation of Space. Not being given in the material, it must therefore constitute the form.

Similar reasoning proves that Time is also the form of our Sensibility, considered both as internal and as external. We cannot conceive things as existing, except as existing in Time ; but we can conceive Time as existing, though all things were annihilated. Things subjected to our Sensibility are subjected to it in *succession* ; that is the form of our Sensibility.

Such then are the two indispensable conditions of all sensation—the two forms with which *we* invest all the varied materials presented to us. It is evident that these two ideas of Space and Time cannot have been given in the materials, consequently are not deducible from experience ; *ergo*, they are *à priori*, or, as Kant calls them, *pure intuitions*.

Having settled this point, he enters into his celebrated examination of the question, *Have Space and Time any objective reality ?*

We need not reproduce his arguments, which however may be studied as fine dialectical exercises, but content ourselves with giving the result. That result is easily foreseen : If Space and Time are the forms of our Sensibility, and are not given in experience, not given in the materials presented, we may at once assume that they have no existence out of our Sensibility. Kant's reduction of Space and Time to formal elements of thought without corresponding objective reality, has been refuted by Herbert Spencer,* who has shown that the experience-hypothesis better explains the genesis of these conceptions. I must not venture to interrupt the exposition of Kant by any quotations, but will add my own conviction that Space and Time are objective realities in the sense that solidity, color, etc., are objective realities ; in other words, although, as we conceive them, they are purely subjective, and do not exist externally *as*

* *Principles of Psychology*, pp. 52-53.

the Space and Time which exist in us, nevertheless *some* external reality there is, corresponding to our subjective state; precisely as there must be some corresponding objects of solidity, color, etc., otherwise the conceptions of solidity, color, etc., would never have been formed.

Returning now to the exposition, we must follow Kant's analysis of the forms of the Understanding. The forms of Sensibility being those of Space and Time, we must pass onwards to the higher operations of the mind. The function of the Understanding is to judge. It is eminently an active faculty; and by it the perceptions furnished through our Sensibility are elevated into conceptions (*Begriffe*). If we had only Sensibility, we should have sensations, but no knowledge. It is to the Understanding that we are indebted for knowledge. And how are we indebted to it? Thus:—the variety of our sensations is reduced to unity—they are linked together and made to interpret each other by the understanding. A sensation in itself can be nothing but a sensation: many sensations can be nothing but many sensations, they can never alone constitute conceptions. But one sensation linked to another by some connecting faculty—the diversity of many sensations reduced to unity—the resemblances, existing amidst the diversity, detected and united together—is the process of forming a conception, and this is the process of the Understanding, by means of imagination, memory, and consciousness.

Our senses, in contact with the external world, are affected by objects in a certain determinate manner. The result Kant calls a representation (*Vorstellung*) in reference to the object represented; an intuition (*Anschauung*) in reference to the affection itself. These intuitions are moulded by the Understanding into conceptions; the sensation is converted into a thought.

The Understanding is related to Sensibility in the same way as Sensibility is related to external things. It imposes certain forms on the materials furnished it by Sensibility, in the same way as Sensibility imposed the forms of space and time upon

objects presented to it. These forms of the Understanding are the laws of its operation.

To discover these forms we must ask ourselves, What is the function of the Understanding?—Judgment. How many classes of judgments are there? In other words, What are the invariable conditions of every possible judgment?—They are four: quantity, quality, relation, modality. Under one of these heads, every judgment may be classed.

A subdivision of each of these classes follows:—1. In judging of any thing under the form of *quantity*, we judge of it as unity or as plurality; or, uniting these two, we judge of it as totality. 2. So of *quality*: it may be reality, negation, or limitation. 3. *Relation* may be that of substance and accident, cause and effect, or action and reaction. 4. *Modality* may be that of possibility, existence, or necessity.

Such are Kant's famous *Categories*. They are little better than those of Aristotle, which we before declared to be useless. For although the object of Kant was different from that of Aristotle, as Sir W. Hamilton points out;* the result was nothing but a cumbrous machinery incompetent to aid our investigations, although very seductive to the lovers of verbal distinctions.

In those Categories Kant finds the *pure forms* of the Understanding. They render thought possible; they are the invariable conditions of all conception; they are the investitures bestowed by the understanding on the materials furnished by sense.

By the Categories, he declares he has answered the second half of the question, How are synthetic judgments, *à priori*, possible? The synthetic judgments of the Categories are all *à priori*. But we have not yet exhausted the faculties of the mind. Sensibility has given us intuitions (perceptions), Understanding has given us conceptions, but there is still another faculty—the crowning faculty of Reason (*Vernunft*), the pure forms of which we have to seek.

* *Discussions*, p. 25.

Understanding is defined, the faculty of judging (*Vermögen der Urtheile*); Reason is the faculty of ratiocination—of drawing conclusions from given premises (*Vermögen der Schlüsse*). Reason reduces the variety of conceptions to their utmost unity. It proceeds from generality to generality till it reaches the *unconditional*. Every conception must be reduced to some general idea, that idea again reduced to some still more general idea, and so on till we arrive at an ultimate and unconditional principle, such as God.

Reason not only reduces particulars to a general, it also deduces the particular from the general: thus, when I say, "Peter is mortal," I deduce this particular proposition from the general proposition, "All men are mortal;" and this deduction is evidently independent of experience, since Peter being now alive, I can have no experience to the contrary. These two processes of reducing a particular to some general, and of deducing some particular from a general, constitute ratiocination.

Reason has three pure forms; or, as Kant calls them, borrowing the term from Plato, *ideas*. These are wholly independent of experience; they are above Sensibility—above the Understanding; their domain is Reason, their function that of giving unity and coherence to our conceptions.

The Understanding can form certain general conceptions, such as man, animal, tree; but these general conceptions themselves are subordinate to a still more general idea, embracing all these general conceptions, in the same way as the conception of man embraces several particulars of bone, blood, muscle, etc. The idea is that of the universe.

In the same way all the modifications of the thinking being—all the sensations, thoughts, and passions—require to be embraced in some general idea, as the ultimate ground and possibility for these modifications, as the noumenon of these phenomena. This idea is that of an *ego*—of a personality—of a soul, in short.

Having thus reduced all the varieties of the *ego* to an uncon-

ditional unity, viz., soul, and having also reduced all the varieties of the *non-ego* to an unconditional unity, viz., the world, his task would seem completed; yet, on looking deeper, he finds that these two ideas presuppose a third—a unity still higher, the source of both the world and of the *ego*—viz., God.

God, the soul, and the world, are therefore the three ideas of reason, the laws of its operation, the *pure forms* of its existence. They are to it what Space and Time are to Sensibility, and what the categories are to Understanding.

But these ideas are simply *regulative*: they operate on conceptions as the Understanding operates upon sensations; they are discursive, not intuitive; they are never face to face with their objects: hence Reason is powerless when employed on matters beyond the sphere of Understanding; it can draw nothing but false, deceptive conclusions. If it attempts to operate beyond its sphere—if it attempts to solve the question raised respecting God and the world—it falls into endless contradictions.

“While we regard as conclusive Kant’s analysis of Time and Space into conditions of thought,” says Sir W. Hamilton, “we cannot help viewing his deduction of the Categories of the Understanding and the Ideas of speculative Reason as the work of a great but perverse ingenuity;” and we, who do not even regard the analysis of Space and Time as conclusive, may echo this judgment with greater emphasis.

§ IV. CONSEQUENCES OF KANT’S PSYCHOLOGY.

We have given briefly the leading points in Kant’s analysis of the mind. We have now to trace the consequences of that analysis.

The great question at issue was: *Have we, or have we not, any ideas which are absolutely, objectively true?* Before this could be answered, it was necessary to answer this other question: *Have we, or have we not, any ideas independent of experience?* Because if we have not such ideas, we can never pretend to solve the first question: our experience can only be of that

which is relative, contingent, *subjective*; and to solve the question, we must be in possession of absolute, necessary, *objective* truth.

Kant answered the second question affirmatively. His *Critique* was a laborious demonstration of the existence of ideas not derived from experience, and in no way resolvable into experience. But he answered the first question negatively. He declared that our ideas are essentially subjective, and cannot therefore have objective truth. He did not deny the existence of an external world; on the contrary, he affirmed it, but he denied that we can know it: he affirmed that it was essentially unknowable.

The world exists,—that is to say, the noumena of the various phenomena which we perceive, exist. The world is not known to us as it is *per se*, but as it is to *us*—as it is in our knowledge of it. It *appears* to us; only the appearance therefore can be known; the world must ever remain unknown, because, before being known, it must appear to us, *i. e.* come under the conditions of our Sensibility, and be invested with the forms of Space and Time, and come under the conditions of our Understanding, and be invested with the categorical forms.

Suppose object and subject face to face. Before the subject can be affected by the object—that is to say, before a sensation is possible—the object must be modified in the sensation by the forms of our Sensibility: here is one alteration. Then before sensation can become thought, it must be subjected to the categories of the Understanding: here is another alteration.*

Now, to know the object *per se*—*i. e.* divested of the modifications it undergoes in the subject—is obviously impossible; for it is the subject itself which knows, and the subject knows only under the conditions which produce these modifications.

Knowledge, in its very constitution, implies a purely subjective, *ergo*, relative character. To attempt to transcend the sphere

* Compare what was said on the transformation of impressions into sensations, pp. 611, *sq.*

of the subjective is vain and hopeless; nor is it wise to deplore that we are "cabin'd, cribb'd, confined" within that sphere from which we never can escape. As well might the bird, when feeling the resistance of the air, wish that it were *in vacuo*, thinking that there it might fly with perfect ease. Let us therefore content ourselves with our own kingdom, instead of crossing perilous seas in search of kingdoms inaccessible to man. Let us learn our weakness.*

FIRST RESULT.—A knowledge of things *per se* (*Dinge an sich*) is impossible, so long as knowledge remains composed as at present; consequently Ontology, as a science, is impossible.

But, it may be asked, if we never knew noumena (*Dinge an sich*), how do we know that they exist? Their existence is a necessary postulate. Although we can only know the appearances of things, we are forced to conclude that the things exist. Thus, in the case of a rainbow, we discover that it is only the appearance of certain drops of water: these drops of water again, although owing their shape, color, etc., to us, nevertheless exist. They do not exist *as* drops of water, because drops of water are but phenomena; but there is an unknown something which, when affecting our Sensibility, appears to us as drops of water. Of this unknown something we can affirm nothing, except that it necessarily exists because it affects us. We are conscious of being affected. We are conscious also that that which affects us must be something different from ourselves. This the law of causation reveals to us.

A phenomenon, inasmuch as it is an appearance, presupposes a noumenon—a thing *which appears*,—but this noumenon, which is a necessary postulate, is only a negation to us. It can never be positively known; it can only be known under the conditions of sense and understanding, *ergo*, as a phenomenon.

SECOND RESULT.—The existence of an external world is ■ necessary postulate, but its existence is only logically affirmed.

* Compare Kant's fine passage at the close of the *Einleitung*.

From the foregoing it appears that we are unable to know any thing respecting things *per se*; consequently we can never predicate of our knowledge that it has objective truth.

But our knowledge being purely subjective and relative, can we have no certainty?—are we to embrace skepticism? No.

THIRD RESULT.—Our knowledge, though relative, is *certain*. We have ideas independent of experience; and these ideas have the character of universality and necessity. Although we are not entitled to conclude that our subjective knowledge is completely true as an expression of the objective fact, yet we are forced to conclude that within its own sphere it is true.

FOURTH RESULT.—The veracity of consciousness is established.

FIFTH RESULT.—With the veracity of consciousness, is established the certainty of morals.

It is here we see the importance of Kant's analysis of the mind. Those who reproach him with having ended, like Hume, in skepticism, can only have attended to his *Critique of the Pure Reason*, which certainly does, as we said before, furnish a scientific basis for skepticism. It proves that our knowledge is relative; that we cannot assume things external to us to be as we conceive them: in a word, that Ontology is impossible.

So far Kant goes with Hume. This is the goal they both attain. This is the limit they agree to set to the powers of the mind. But the different views they took of the nature of mind led to the difference we before noted respecting the certainty of knowledge. Kant having shown that consciousness, as far as it extended, was veracious; and having shown that in consciousness certain elements were given which were not derived from experience, but which were necessarily *true*; it followed that whatever was found in consciousness independent of experience, was to be trusted without dispute.

If in consciousness I find the ideas of God, the world, and virtue, I cannot escape believing in God, the world, and virtue. This belief of mine is, I admit, practical, not theoretical; it is founded on a *certainly*, not on a *demonstration*; it is an ultimate

fact, from which I cannot escape—it is not a conclusion deduced by reason.

The attempt to demonstrate the existence of God is an impossible attempt. Reason is utterly incompetent to the task. The attempt to penetrate the essence of things—to know things *per se*—to know noumena—is also an impossible attempt. And yet that God exists, that the world exists, are irresistible convictions.

There is another certitude, therefore, besides that derived from demonstration, and this is moral certitude, which is grounded upon belief. I cannot say, “It is morally certain that God exists,” but I must say, “I am morally certain that God exists.”

Here then is the basis for a *Critique of the Practical Reason*, an investigation into the Reason, no longer as purely theoretical, but as practical. Man is a being who acts as well as knows. This activity must have some principle, and that principle is *freedom of will*.

As in the theoretical part of Kant's system we saw the supersensual and unconditioned presupposed as existent (under the name of things *per se*), but not susceptible of being known or specified; so in this practical part of the system we find the principle of freedom altogether abstract and indeterminate. It realizes itself in acts.

In the very constitution of his conscience, man discovers the existence of certain rules which he is imperatively forced to impose upon his actions; in the same way as he is forced by the constitution of his reason to impose certain laws upon the materials furnished him from without. These moral laws have likewise the character of universality and necessity. The idea of virtue never could be acquired in experience, since all we know of virtuous actions falls short of this ideal which we are compelled to uphold as a type. The inalterable idea of justice is likewise found, *à priori*, in the conscience of men. This, indeed, has been denied by some philosophers; but all *à priori* truths have been denied by them. They cite the cruel customs of some

savage races as proofs that the idea of justice is not universal.* Thus, some tribes are known to kill their old men when grown too feeble; and they test their strength by making these old men hold on to the branch of a tree, which is violently shaken, and those that fall are pronounced too weak to live. But even here, in spite of the atrocity, we see the fundamental ideas of justice. Why should they not abandon these aged men to all the horrors of famine and disease? and why put them to a test? Look where you will, the varied customs of the various nations peopling the earth will show you different notions of what is just and what is unjust; but the *à priori* idea of justice—the moral law from which no conscience can be free—that you will find omnipresent.

We regret that our space will not permit us to enter further into Kant's system of morality, and his noble vindication of the great idea of duty. But enough has been said to show the dependence of his *Critique of the Practical Reason* upon the principles of his *Critique of the Pure Reason*; a dependence which some hasty critics have pronounced an unphilosophical compromise.

§ V. EXAMINATION OF KANT'S FUNDAMENTAL PRINCIPLES.

Kant's system presents three important points for our consideration:

1. It assigns a limit to the powers of reason, and clearly marks out the domain of scientific inquiry. In this it is skeptical, and furnishes skepticism with terrible weapons.
2. It proclaims that knowledge has another origin besides experience; and that the ideas thus acquired are necessarily true. In this the veracity of consciousness is established, and skepticism is defeated.
3. It founds upon this veracity of consciousness a system of morals; the belief in a future state, and in the existence of God.

* Kant alludes to Locke.

In the course of our exposition we abstained from criticism ; certain that it would lead us far beyond our limits to venture on an examination of any but the fundamental principles. The three points above mentioned will, if closely examined, be found to present only one calling for discussion here, and that one is the second.

For the admission contained in the first—viz. that we are unable to know things in themselves—gives up Philosophy as a matter beyond the reach of human intelligence. Skepticism is made the only result of ontological speculation. But we are guarded against such a conclusion entering deeply into practical life, by the demonstration of our having ideas independent of experience. This is the second point. Were this second point to fall to the ground, nothing but skepticism could remain. With the second point must stand or fall the third.

The second point, therefore, becomes the central and vital point of Kant's system, and must engage our whole attention. All such subsidiary criticism as is current in Germany and France, respecting the impossibility of separating the objective from the subjective elements of a knowledge which is confessedly both subject and object in one, may be safely set aside. Let the possibility be granted ; the vital question is not connected with it. The same may be said of the illogicality of Kant's assuming for the practical reason that which he denies to the pure reason. The vital point in his system is, we repeat, the question as to whether we have ideas independent of experience. This is all-important.

And what gives it its importance ? The conviction, that if we are sent into this world with certain connate principles of truth, those principles cannot be false ; that if, for example, the principle of causality is one which is antecedent to all experience, and is inseparable from the mind, we are forced to pronounce it an ultimate truth.

Let us meditate on this question. As Kant confessedly was led to his own system by the speculations of Hume on causation,

and as that is the most important of all the *à priori* ideas with which the mind is supposed to be furnished, we will content ourselves with examining it. If that be found dependent on experience, all the *à priori* ideas must be likewise given up. This is the nut we have to crack; its kernel is the kernel of the whole question. Let us first consider these Necessary Truths, as Dr. Whewell calls *à priori* ideas.

That two parallel lines can never meet, is a Necessary Truth. That is to say, it necessarily follows from the definition of a straight line. To call it, however, an *à priori* truth, a truth independent of experience, seems to us a very imperfect analysis of the mind's operations. An attempt is made to prove that the idea could never have been gained through experience, because it commands universal assent, and because experience itself could never give it necessity. Dr. Whewell's argument is, that let us follow two parallel lines out as far as we can, we are still unable to follow them to infinity: and, for all our experience can tell us to the contrary, these lines may possibly begin to approach immediately beyond the farthest point to which we have followed them, and so finally meet. Now what ground have we for believing that this possibility is not the fact? In other words, how do we know the axiom to be absolutely true? Clearly *not* from experience, says Dr. Whewell, following Kant.

We answer, Yes; clearly *from* experience. For our experience of *two parallel* lines is precisely this: they *cannot* inclose space. Dr. Whewell says that, for all our experience can tell us to the contrary, the lines may possibly begin to approach each other at some distant point; and he would correct this imperfect experience by *à priori* truth. The case is precisely the reverse. The tendency of the mind unquestionably is, to fancy that the two lines *will* meet at some point; it is *experience* which corrects this tendency. There are many analogies in nature to suggest the meeting of the two lines. It is only our reflective experience which can furnish us with the proof which Dr. Whewell refers to ideas independent of all experience. What proof have we

that two parallel lines cannot inclose space? Why this: as soon as they *assume the property of inclosing space*, they *lose the property of parallelism*—they are no longer *straight* lines, but *bent* lines. In carrying out imaginatively the two parallel lines into infinity, we have a tendency to make them approach; we can only correct this by a recurrence to our experience of straight lines: we must call up a distinct image of a straight line, and then we see that two such lines cannot inclose space.

The whole difficulty lies in the clearness or obscurity with which the mind makes present to itself past experience. "Refrain from rendering your terms into ideas," says Herbert Spencer, "and you may reach any conclusion whatever. The whole is equal to its part, is a proposition that may be quite comfortably entertained so long as neither wholes nor parts are imagined."* But no sooner do we make present to our minds the meaning of parallel lines, than in that very act we make present the impossibility of their meeting, and only as the idea of these lines becomes wavering, does the idea of their meeting become possible.

"Necessary truths," says Dr. Whewell, "are those in which we not only learn that the proposition *is* true, but see that it *must* be true; in which the negation is not only false, but impossible; in which we cannot, even by an effort of the imagination, or in a supposition, conceive the reverse of that which is asserted. That there are such truths, cannot be doubted. We may take, for example, all relations of Number. Three and two make five. We cannot conceive it otherwise. We cannot by any freak of thought imagine that three and two make seven."

That Dr. Whewell cannot by any freak of thought *now* imagine three and two to make seven, is very likely; but that he could *never* imagine this, is untrue. If he had been asked the question before he had *learned* to reckon, he would have imagined seven quite as easily as five: that is to say, he would *not*

* *Principles of Psychology*, p. 49.

have known the relation of three and two. Children have no intuitions of numbers: they learn them as they learn other things. "The apples and the marbles," says Herschel, "are put in requisition, and through the multitude of gingerbread-nuts their ideas acquire clearness, precision, and generality." But though, from its simplicity, the calculation of three added to two, is with a grown man an instantaneous act; yet if you ask him suddenly how many are twice 365, he cannot answer till he has reckoned. He might, certainly, by a very easy "freak of thought" (*i. e.* by an erroneous calculation), imagine the sum-total to be 720; and although when he repeats his calculation, he may discover the error, and declare 730 to be the sum-total, and say, "It is a Necessary Truth that 365 added to 365 make 730," we should not in the least dispute the necessity of the truth, but presume that he himself would not dispute that he had arrived at it through experience, namely, through his knowledge of the relations of numbers, a knowledge which he remembers to have laboriously acquired when a boy at school.

The foregoing remarks having, we trust, established that the truths of Geometry and Arithmetic, which form one class of the so-called Necessary Truths, are not obtained *à priori*, independently of Experience, we pass on to the other class, which we would call Truth of Generalization.

Our example shall be that chosen by Kant: "Every effect must have a cause." This is not a mere *writing out* of our conceptions: it is not a mere explanation, in different terms, of what we mean. It is a wide generalization. Experience can only be experience of individual causes and effects; and although in our conception of an effect the conception of a cause is certainly involved, and in so far the judgment may be supposed an analytic judgment, yet if we look closer, the ambiguity will disappear. The *word* effect implies as a correlative the *word* cause. But the *Thing* we see before us does not imply the existence of some *other Thing* which *caused* it; and our judgment that it must have had an antecedent cause, is purely synthetic.

When we assert that every effect must have a cause, we assert that which no experience can have warranted. Is the idea therefore acquired through some other channel? No; and the upholders of the doctrines of Innate Ideas, Fundamental Laws of Belief, Categories of the Understanding, and Necessary Truths, appear to us to labor under a confusion of thought which a very little well-directed analysis might have cleared up. The confusion is this:—Our experience is obviously incapable of guaranteeing the truth of any universal and necessary idea. But to assume therefore that the idea is independent of experience, is to forget that what experience may not *guarantee*, it may *suggest*; and the universality and necessity of our ideas, is nothing more nor less than the suggestions of the understanding, which by the law of its operation generalizes from particulars, and converts them into universals. We will presently explain this more fully; let us now hear Kant, who distinguishes a pure cognition from an empirical cognition by this mark of necessity and universality. "Experience no doubt teaches us that this or that object is constituted in such and such a manner, but not that it could not possibly exist otherwise." . . . "Empirical universality is only an arbitrary extension of the validity from that which may be predicated of a proposition valid in most cases to that which is asserted of a proposition which holds good in all. When, on the contrary, strict universality characterizes a judgment, it necessarily indicates another peculiar source of knowledge, namely, a faculty of cognition *à priori*. Necessity and strict universality, therefore, are infallible tests for distinguishing pure from empirical knowledge, and are inseparably connected with each other."* And elsewhere: "If we thought to free ourselves from the labor of these investigations by saying, 'Experience is constantly offering us examples of the relation of cause and effect in phenomena, and presents us with abundant opportunity of abstracting the conception of cause, and so at the same time of corroborating the

* *Einleitung*, § ii. (Transl. p. 3).

objective validity of this conception"—we should in this case be overlooking the fact that the conception of cause cannot arise in this way at all; that on the contrary it must either have a basis in the Understanding, or be rejected as a mere chimera. For this conception demands that something (A) should be of such a nature that something else (B) should follow from it necessarily, and according to an absolutely universal law. We may certainly collect from phenomena a law, according to which this or that *usually* happens, but the element of necessity is not to be found in it. Hence it is evident that to the synthesis of cause and effect belongs a dignity which is utterly wanting in any empirical synthesis."*

Referring to what was said in discussing Hume's theory of causation, we may pass on to Dr. Whewell's re-statement of Kant's views:

"That this idea of cause is not derived from experience, we prove (as in former cases) by this consideration: that we can make assertions, involving this idea, which are rigorously necessary and universal; whereas knowledge derived from experience can only be true as far as experience goes, and can never contain in itself any evidence whatever of its necessity. We assert that "every Event must have a Cause:" and this proposition we know to be true, not only probably and generally and as far as we can see; but we cannot suppose it to be false in any single instance. We are as certain of it as we are of the truths of arithmetic and geometry. We cannot doubt that it must apply to all events, past, present, and to come, in every part of the universe, just as truly as to those occurrences which we have ourselves observed. *What* causes produce what effects;—what is the cause of any particular event; what will be the effect of any peculiar process; these are points on which experience may enlighten us. But that every event must have *some* cause, Experience cannot prove any more than she can disprove. She

* *Transcendental. Logik*, § 9 (Transl. p. 76).

can add nothing to the evidence of the truth, however often she may exemplify it. This doctrine then cannot have been acquired by her teaching : and the Idea of Cause which the doctrine involves, and on which it depends, cannot have come into our minds from the region of observation.”*

There is one minor point in this argument which we must notice first. Dr. Whewell says that the proposition “Every event must have ■ cause” cannot possibly be false in any one instance. We think there is one, which he himself would admit ; but to make it clear, we must substitute an equivalent for “event.” The abstract formula of causation is this : “Every existence presupposes some Cause of its existence : *ex nihilo nihil fit.*” And this formula is employed against the atheists, to prove that the world could not have made itself out of Nothing, *ergo* it must have had a Cause. Now the obvious answer has often been given, namely, that the Cause itself must have had a Cause, and so on *ad infinitum*. Nevertheless, as reason repugns such an argument, and as it declares that *somewhere* the chain of causes and effects must stop, in that very declaration it falsifies the formula of causation—“*Every* existence must have a cause.”

Let not this be thought quibbling ; it is only an exposure of the weakness of the theory of causation. If that theory be correct—if the formula is ■ necessary Truth, objectively as well as subjectively, the argument against atheism falls to the ground. For, would the atheist argue, this is the dilemma : either the chain of causes and effects must be extended to infinity ; or you must stop somewhere, and declare that the ultimate Existence has no cause. In the first case you fall into unlimited skepticism ; in the second you fall into atheism, because the world is an Existence of which we are assured : why, then, is not *it* the ultimate Existence ? You have no right to assume any prior cause ; if you must stop somewhere, it is more rational to stop there.

* *Philos. Ind.* etc., vol. i. p. 159.

This dilemma admits of but one escape-hole, namely, the denial of the formula "Every existence presupposes a cause" being any thing more than a psychological law. Curiously enough, the only loophole is in the doctrine maintained by David Hume—a doctrine for so many years supposed to be the inlet of theological skepticism!

Our belief in the formula "Every event must have a cause" is founded entirely on experience: is, indeed, nothing more than our experience generalized.

To prove this, we will consider a single case of causation. A child burns his finger in the candle; he then believes that a candle will *always* burn his fingers. Now we are asked how it is that the child is led to believe that the candle will always burn his finger; and the answer usually afforded is, that "he is irresistibly led to believe in the uniformity of nature;" in other words, the idea of causality is a *fundamental idea*.

We answer, The child believes the candle will burn, because the experience he has of a candle is precisely *this experience* of its burning properties. Before he had burnt his finger, his experience of a candle was simply of a bright thing which set paper alight. Having now *extended his experience*, the candle is to him a bright thing which sets paper alight, and which causes pain to his finger when placed in contact with it.*

According to the well-known law of association, the flame of a candle, and pain to the finger applied to it, are united, and form one experience. This particular act of causation is therefore nothing but a simple experience to the child; and for the perfection of this experience it is in nowise needful to assume that the child has any belief in the "connection of events," or in the "uniformity of the laws of Nature." No fundamental idea is necessary for the *particular* belief.† Is it then necessary for the

* See p. 486 *sq.*, where the argument is stated more fully.

† This is denied by the thinkers whom we are now combating: they assume that the fundamental idea is necessary; but this is a mere assumption.

belief in the general proposition—"Every effect must have a cause?"

When Kant and the Kantists say that no particular act of causation can be inferred *à priori* (such, for example, as that fire will melt the solid wax); but that nevertheless causality itself can be inferred *à priori*, *i. e.* we are constrained to believe that *something* will follow the application of fire to the wax, and *this à priori* judgment is independent of experience,—they seem to me to fall into the error of confounding the general with the particular. No general proposition is possible except as an expression of particular propositions; and all particular propositions are the expression of particular experiences. "That all lions are carnivorous" is only intelligible as a general proposition after one or more lions have been recognized as carnivorous; that "every effect must have a cause" is only conceivable after many particular experiences of causes and effects. No particular act of causation can be inferred *à priori*, because for each particular inference we need the basis of particular experience; but general causation seems possible to be inferred *à priori*, because in the full-statured mind general causation has a basis of general experience. I must know that fire does melt wax, before I can infer that it will melt wax; but I can infer that fire will do something to wax, *after* my general experience of fire is, that it has always done something to bodies. This *general* inference is founded on and limited by *general* experience, in the same way as *particular* inferences are founded on *particular* experience. The uncultured mind will be as powerless to deduce the general inference, as the cultured mind is, to deduce the particular inference, *à priori*; and so true is this, that only philosophical thinkers are capable of steadily believing in that causality which Dr. Whewell designates as a fundamental idea.

Thus, belief in particular laws of causation is no more than *belief in our experience*; and if we are asked why we believe

tion made for the purpose of saving their theory, an assumption of the very point at issue.

that our future experience will resemble the past, we answer, because we have no other possible belief of things than that which is formed by experience: we cannot possibly believe the candle as *not* burning us in future, because our experience of a candle has been, that it *does* burn, and our beliefs cannot transcend the experience which made them.

As to the belief in universal causation, we may prove in various ways that it is the result of a mere act of generalization; and this very act itself is strictly limited by experience: that is to say, we are led by the laws of our mind to judge of the unknown according to the known. Thus, having found every event which has come under our cognizance produced by some cause, we conclude that every possible event must have a cause. We judge of the unknown by the known. Familiar illustrations of this generalizing tendency are those rash judgments formed of nations and of classes, and founded on the experience of a single fact. Thus we once heard it gravely asserted, that "*all* French babies had long noses." The person asserting it had seen a French baby with a long nose. Now the only conception of a French baby in this person's mind was that of a baby with a long nose. That was the type according to which all unseen, unknown babies were judged. Not being a very reflective person, he could not divest himself of his conception, and he could not believe that his conception was not true of all French babies. Had he never seen other French babies, he would perhaps have died in the belief that they all had long noses; unless some better-informed person had corrected this conception by his larger experience. So, if we had only the experience of one fact of causation, we should always believe in that fact—we should always believe that all candles would burn. To make many similar experiences of the conjunction of cause and effect, is not only to have many beliefs in particular acts of causation, it is also to collect materials for a wide generalization, and from these known conjunctions to pronounce that formula of universal conjunction applied to unknown and yet unborn events.

This latter process, however, is performed by few. All believe irresistibly in particular acts of causation. Few believe in universal causation; and those few not till after considerable reflection. Philosophers, indeed, assure us that this belief is universal; that it is an *instinct*; a law of the mind; a Fundamental Idea. If philosophers would take the trouble to inquire amongst intelligent people, they would find that, so far from the belief in question being instinctive and irresistible, the great majority have no consciousness at all of such an instinct—the belief never having once presented itself to their minds—the proposition requiring a great deal of explanation and argument before it can be received; and amongst those persons many would absolutely refuse to admit the truth of the proposition. Those who live only amongst philosophers will doubt this. We can, however, declare that it has more than once come within our experience. We have argued with a student of chemistry, whom we found it impossible to convince that the law “Every event has some cause” is universal. He not only could conceive it to be otherwise in the moon; but he looked upon our argument as an unwarrantable assumption. The mystery of this was, that he had never read any metaphysics, and had but mediocre powers of ratiocination. What shall we say to an instinctive belief, which, unlike all other instinctive beliefs, does not spontaneously present itself to our consciousness; and when presented, is with the utmost difficulty accepted; and accepted only by some? Compare this with any other instinctive belief—that in the existence of an external world, for instance—and see what characters the two have in common. Ask a boor if he believe in the existence of the world, and he will think you mad to ask him. Ask an ordinary man if he believe that every effect must have a cause, and the chances are that he will tell you he does not know; you will find it difficult to make him understand the necessity.

Nay, to leave ordinary men, and to confine ourselves to philosophers, amongst them we shall find that, with respect to one class of phenomena, more than one-half of the thinking world

is firmly convinced that every effect does *not* imply a cause: the class of phenomena referred to are those of human volitions. All those who espouse the doctrine of Freedom of the Will declare that all our volitions are self-caused,—that is to say, our volitions are not caused by any thing external to themselves, not determined by any prior fact.

If, then, speculative men can be led to believe that one large class of phenomena is not amenable to the law of cause and effect, what becomes of the *universality* of causation? And if speculative men can conceive the laws of cause and effect to be absent from some phenomena, and ordinary men do not conceive these laws to be universally applicable, what becomes of the *necessity*? And if the mass of mankind require a considerable quantity of argument and explanation to make them understand the proposition, what becomes of the *instinctive belief*?

It is argued that a belief in a particular act of causation is only possible on the assumption of a fundamental idea of causality inherent in the mind; that, although a child may never have had the formula "Every effect must have a cause" presented to his mind, nevertheless this formula is *implicitly* in his mind, otherwise he would have no reason for believing in the particular act; it must exist as a fundamental idea. We might as rationally argue that a child cannot have an idea of a man without previously having a fundamental idea of humanity.

The fallacy lies in this: the fundamental idea of causality is a generalization. Now, of course, the general includes the particulars; but, though it *includes*, yet it does not *precede* them, and the error is in supposing that it must and does precede them. A boy, as Locke says, knows that his whole body is larger than his finger; but he knows this from his perceptions of the two, not from any knowledge of the axiom that the "whole is greater than a part." Dr. Whewell would say that he could not have such knowledge unless he had the fundamental idea; whereas, we side with Locke in asserting that the mind in such cases

never *begins* with generalities, but *ends* with them; and to say, that because the general axiom implies the particular instance, or that the particular instance implies the general axiom, therefore the axiom is independent of experience, is to cheat one's self with words.

The belief in causation is belief founded upon the experience of particular acts of causation.

The irresistible tendency we have to anticipate that the future course of events will resemble the past, is simply that we have experience *only* of the past, and, as we cannot *transcend* our experience, we cannot conceive things really existing otherwise than as we have known them. From this we draw a conclusion strikingly at variance with the doctrine maintained by Kant and Dr. Whewell. We say, that the very fact of our being compelled to judge of the unknown by the known—of our irresistibly anticipating that the future course of events will resemble the past—of our incapacity to believe that the same effects should not follow from the same causes—this very fact is a triumphant proof of our having no ideas *not* acquired through experience. If we had *à priori* ideas, these, as independent of, and superior to, all experience, would enable us to judge the unknown according to some *other* standard than that of the known. But no other standard is possible for us. We cannot by any effort believe that things will not always have the properties we have experienced in them; as long as they continue to exist, we must believe them to exist as we know them.

Although belief in particular acts of causation is irresistible and universal, yet belief in the general proposition "*Every* effect must have a cause" is neither irresistible nor universal, but is entertained only by a small portion of mankind. Consequently the theory of *à priori* ideas independent of all experience, receives no support from the idea of Causality.

In a "Letter to the Author of the *Prolegomena Logica*," Dr. Whewell has restated his views, to meet the objections of his critics; and as this is the latest development of the Kantian

doctrine which I have seen, it may not be uninstrusive to consider it.

Dr. Whewell's main positions are, that Necessary Truths, or Fundamental Ideas, are independent of experience, and are intuitions, which are seen not only to be true, but *necessarily* true, because their contraries are inconceivable. The only condition presupposed is, that the Ideas be clearly conceived. He says: "I lay stress on the condition that the Ideas must be *clearly and distinctly possessed*. The Idea of Space must be quite clear in the mind, or else the Axioms of Geometry will not be seen to be true: there will be no *intuition* of their truth; and for a mind in such a state, there can be no Science of Geometry. A man may have a confused and perplexed, or a vacant and inert state of mind, in which it is not clearly apparent to him, that two straight lines cannot inclose a space. But this is not a frequent case. The Idea of Space is much more commonly clear in the minds of men than the other Ideas on which science depends, as Force or Substance. It is much more common to find minds in which these latter Ideas are not so clear and distinct as to make the Axioms of Mechanics or of Chemistry self-evident. Indeed, the examples of a state of mind in which the Ideas of Force or of Substance are so clear as to be made the basis of science, are comparatively few. They are the examples of minds scientifically cultivated, at least to some extent. Hence, though the Axioms of Mechanics or of Chemistry may be, in their own nature, as evident as those of Geometry, they are not evident to so many persons, nor at so early a period of intellectual or scientific culture. And this being the case, it is not surprising that some persons should doubt whether these Axioms are evident at all; I should think that it is an error to assert that there exist, in such sciences as Mechanics or Chemistry, Fundamental Ideas fit to be classed with Space, as being, like it, the origin of Axioms."

Aware that many of these intuitive ideas are so far from being universally acknowledged that many persons can conceive the contraries, he adds :

"This difficulty has been strongly urged by Mr. Mill, as supporting his view, that all knowledge of truth is derived from experience. And in order that the opposite doctrine, which I have advocated, may not labor under any disadvantages which really do not belong to it, I must explain, that I do not by any means assert that those truths which I regard as necessary, are all equally evident to common thinkers, or *evident to persons in all stages of intellectual development*. I may even say, that some of those truths which I regard as necessary, and the necessity of which I believe the human mind to be capable of seeing, *by due preparation and thought*, are still such, that this amount of preparation and thought is rare and peculiar; and I will willingly grant, that to attain to and preserve such a clearness and subtlety of mind as this intuition requires, *is a task of no ordinary difficulty and labor*."

What, it may be asked, is all this preparation, and labor, but experience? If these Fundamental Ideas are "Intuitions" which cannot be given by experience, but are above and beyond it, how is all this experience needed before these Necessary Truths can be seen to be true? Dr. Whewell is ready with his answer:

"That some steady thought, and even some progress in the construction of Science, is needed in order to see the necessity of the Axioms thus introduced, is true, and is repeatedly asserted and illustrated in the *History of the Sciences*. The necessity of such Axioms is seen, but it is not seen at first. It becomes clearer and clearer to each person, and clear to one person after another, as the human mind dwells more and more steadily on the several subjects of speculation. *There are scientific truths which are seen by intuition, but this intuition is progressive*. This is the remark which I wish to make, in answer to those of my critics who have objected that truths which I have propounded as Axioms, are not evident to all."

That this is no answer at all, but is virtually a concession of the very point in dispute, will be seen by an attentive perusal of

the following passage, wherein he brings his new form of the doctrine into greater distinctness :

"An able writer in the *Edinburgh Review* (No. 193, p. 29) has, in like manner, said, 'Dr. Whewell seems to us to have gone much too far in reducing to necessary truths what assuredly the generality of mankind will not feel to be so.' It is a fact which I do not at all contest, that the *generality of mankind* will not feel the Axioms of Chemistry, or even of Mechanics, to be necessary truths. But I had said, not that the generality of mankind would feel this necessity, but (in a passage just before quoted by the Reviewer) that the mind, under certain circumstances, *attains a point of view* from which it can pronounce mechanical (and other) *fundamental truths to be necessary in their nature, though disclosed to us by experience and observation.*"

If these truths, said to be intuitive and independent of experience, are by Dr. Whewell confessed to be "disclosed by experience," there can be but one point of separation between him and his critics ; and, if I have understood him aright, that point is the character of "necessity," which, in common with Kant, he ascribes to these truths. The fundamental ideas, when seen, are seen to be not only true, but necessarily true ; and in this necessity lies their distinctive characteristic.

I conceive that no such distinction whatever can be made out between truths which are necessary and truths which are contingent. All truth is necessary truth. Although all *opinions* are by no means of one character, some being evident, some probable, some very uncertain ; yet all truths are true. That "fire burns" is a truth as "necessary" as that two parallel lines cannot inclose space. That sulphur has a greater affinity for iron than for lead, is a truth as "necessary" as that the whole is greater than a part. That iron-rust is owing to the action of oxygen, is as "necessary" a truth as that two and two make four. It is our knowledge which is contingent, not the truth itself. We *may* be in error when we believe the fact of sulphur's greater affinity for iron than for lead ; in matters so ill-

understood as chemical actions, error is very conceivable, and our supposed truth *may* turn out a misconception; but *if* the relation be truly stated, the truth is as "necessary" as that two and two make four. The whole question, therefore, that can be raised, is: Is the asserted relation true? and not, Is the truth necessary?

To make this clearer, let us, instead of the proposition "two and two make four," substitute "seventy-two and one hundred and forty make two hundred and twelve." In the one case error is impossible; by no freak of thought can we conceive two and two as making five; the truth is perceived directly, and the inconceivability of the contrary is confessed. In the latter case error is very possible; unless a careful calculation be made, the mind may fall into error, *i. e.* conceive the contrary of what is true. But in each case the truth expressed is the relation of numbers, which we ascertain by experience. So also the proposition "fire burns" is a necessary truth, the contrary to which is as inconceivable as the contrary of "two parallel lines can never inclose space." For although we can imagine it "possible" that fire, under some circumstances, should not burn, we can only imagine it by mentally substituting for fire some *other* thing called by that name, just as we can only imagine parallel lines inclosing space by mentally bending the lines, and making them *other* than parallel.

Truths are nothing but perceived relations; some of these relations are so simple, are so universally presented to our experience, that we cannot conceive them to be otherwise; and thus no freak of thought will enable us to conceive fire not burning, two and two making five, or parallel lines inclosing space; while other relations are so complicated, or so unfamiliar, that we very easily conceive the possibility of their being otherwise. The oxidation of substances is so familiar to the chemist, that he cannot conceive what to the general public is very conceivable; the relations of lines and surfaces are so familiar to the geometer, that he cannot conceive the contrary of Euclid's propositions:

to him they are irresistible truths; but he can remember the time when they were by no means irresistible. Dr. Whewell explains this difference by the difference in the clearness with which the geometer "possesses the Idea of Space," a clearness only to be obtained through great labor and training of the mind; and we think no philosopher ever propounded any other explanation, certainly no philosopher belonging to the school which derives all our ideas from experience.

The distinction, then, between the so-called Necessary and Contingent Truths, is not that the former are independent of experience, and are truths seen to be *necessarily* true, while the latter are seen to be contingently true, the contraries being conceivable. All truths are seen to be necessarily true, if they are seen to be true at all; and the character of contingency is not applicable to the relations expressed in certain formulas, but solely to the modes in which we got at those formulas: the contingency of "seventy-two and one hundred and forty making two hundred and twelve," is the liability of our miscalculating; and the proposition is a contingent one until we have so checked our calculation as to be certain we have ascertained the true relations. Thus it is held that all animals with incisor teeth are carnivorous; we have ascertained it by our universal experience of carnivorous animals; but, strong as the presumption is that the relation is true, we are forced to consider it a contingent truth, because there is a possibility of our experience some day detecting an exception; just as exceptions have been detected to the general relation between comparative length of the intestine in herbivorous, and shortness of it in carnivorous, animals. but we never call the proposition "a whole is greater than its part" a contingent truth, because no extension of experience could alter relations so simple and so universal; we cannot call "fire burns paper" a contingent truth, because no extension of experience can alter relations so simple: if, by way of exception, a case of incombustible paper be exhibited, we know that the original proposition meant ordinary paper, and not paper of different prop-

erties. We cannot call the truth "sugar is sweet" contingent, because any extension of our experience which made us acquainted with sugar not sweet, would bring forward some other kind of thing than that which we designate by the name of sugar. We cannot call the truth "iron is heavy" contingent. We can call no truths contingent except those which express relations either complicated or unfamiliar; simplicity of relation implying directness of perception, and universality of experience coercing the mind into uniformity of expectation. The Fundamental Ideas which Dr. Whewell distinguishes as Necessary Truths, are nothing more than ideas framed in our minds by the uniformity of our experience. And thus we return to the old position, that experience, and experience alone, is the source of all ideas.

If the foregoing arguments are valid, what becomes of Kant's system? We are forced to conclude, that inasmuch as his stronghold—the existence of *à priori* ideas—cannot sustain attack, the entrance of the enemy Skepticism is inevitable. Kant was not a skeptic; but he deceived himself in supposing that his system was any safeguard from Skepticism.

The veracity of Consciousness, which he had so laboriously striven to establish, and on which his *Practical Reason* was based, is only a relative, subjective veracity. Experience is the only basis of Knowledge; and Experience leads to Skepticism.

NINTH EPOCH.

ONTOLOGY RE-ASSERTS ITS CLAIM.—THE DEMONSTRATION
OF THE SUBJECTIVITY ONCE MORE LEADS TO IDEALISM.

CHAPTER I.

FICHTE.

§ I. LIFE OF FICHTE.

JOHANN GOTTLIEB FICHTE was born at Rammenau, a village lying between Bischofswerda and Pulsniz, in Upper Lusatia, on the 19th May, 1762.*

His childhood, of which many touching anecdotes are related, was signalized by extraordinary intellectual capacity and great moral energy. He was a precocious child, and long before he was old enough to be sent to school he learned many things from his father, who taught him to read, and taught him the pious songs and proverbs which formed his own simple stock of erudition. With these various studies was mixed an enchanting element—the stories of his early wanderings in Saxony and Franconia, stories to which young Johann listened with never-tiring eagerness. It was probably the vague longings which these recitals inspired, that made him wander into the fields, quitting his companions, boisterous in mirth, to roam away and enjoy the luxury of solitude, there to give vent to the indul-

* See the biography by Fichte's son—*Fichte's Leben und literarischer Briefwechsel*, 2 vols., 1836.

gence of those unspeakable longings. This pale and meditative child is at ease in solitude. He stands for hours, gazing in the far distance, or in mournful yearning at the silent sky over-arching him. The sun goes down, and the boy returns home melancholy with the twilight. He does this so constantly that neighbors remark it ; comment on it ; and, in after-years, when that boy has become a renowned man, they recur to it with sudden pleasure, not forgetting also that they had "always said there was something remarkable in the boy."

Fichte's progress was so rapid that he was soon intrusted with the office of reading family prayers ; and his father cherished the hope of one day seeing him a clergyman. An event curious in itself, and very important in its influence on his subsequent career, soon occurred, which favored that hope, and went far to realize it. But before we relate it we must give a touching anecdote, which exhibits Fichte's heroic self-command in a very interesting light.*

The first book which fell into his hands after the Bible and Catechism, was the renowned history of *Siegfried the Horned*, and it seized so powerfully on his imagination, that he lost all pleasure in any other employment, became careless and neglectful, and, for the first time in his life, was punished. Then, in the spirit of the injunction which tells us to cut off our right hand if it cause us to offend, Fichte resolved to sacrifice the beloved book, and, taking it in his hand, walked slowly to a stream flowing past the house, with the intention of throwing it in. Long he lingered on the bank, ere he could muster courage for this first self-conquest of his life ; but at length, summoning all his resolution, he flung it into the water. His fortitude gave way as he saw the treasure, too dearly loved, floating away forever, and he burst into a passionate flood of tears. Just at this moment the father arrived on this spot, and the weeping child told what he

* For both anecdotes we are indebted to a very interesting article on Fichte which appeared in the *Foreign Quarterly Review*, No. 71. We have abridged the passages ; otherwise the narrative is unaltered.

had done ; but either from timidity or incapacity to explain his feelings, was silent as to his true motive. Irritated at this treatment of his present, Fichte's father inflicted upon him an unusually severe punishment, and this occurrence formed a fitting prelude to his after-life, in which he was so often misunderstood, and the actions springing from the purest convictions of duty, were exactly those for which he had most to suffer. When a sufficient time had elapsed for the offence to be in some measure forgotten, the father brought home another of these seducing books ; but Fichte dreaded being again exposed to the temptation, and begged that it might rather be given to some of the other children.

It was about this time that the other event before alluded to occurred. The clergyman of the village, who had taken a fancy to Gottlieb and often assisted in his instruction, happened one day to ask him how much he thought he could remember of the sermon of the preceding day. Fichte made the attempt, and, to the astonishment of the pastor, succeeded in giving a very tolerable account of the course of argument, as well as of the texts quoted in its illustration. The circumstance was mentioned to the Count von Hoffmansegg, the lord of the village, and one day another nobleman, the Baron von Mittiz, who was on a visit at the castle, happening to express his regret at having been too late for the sermon on the Sunday morning, he was told, half in jest, that it was of little consequence, for that there was a boy in the village who could repeat it all from memory. Little Gottlieb was sent for, and soon arrived in a clean smock-frock and bearing a large nosegay, such as his mother was accustomed to send to the castle occasionally as a token of respect. He answered the first questions put to him with his accustomed quiet simplicity ; but when asked to repeat as much as he could recollect of the morning's sermon, his voice and manner became more animated, and, as he proceeded, entirely forgetting the presence of the formidable company, he became so fervid and abundant in his eloquence, that the Count thought it necessary to interrupt

him, lest the playful tone of the circle should be destroyed by the serious subjects of the sermon. The young preacher had however made some impression on his auditory; the Baron made inquiries concerning him, and the clergyman, wishing for nothing more than an opportunity to serve his favorite, gave such an account that the Baron determined to undertake the charge of his education. He departed, carrying his *protégé* with him, to his castle of Siebeneichen, in Saxony, near Meissen, on the Elbe; and the heart of the poor village boy sank, as he beheld the gloomy grandeur of the baronial hall, and the dark oak forests by which it was surrounded. His first sorrow, his severest trial, had come in the shape of what a misjudging world might regard as ■ singular piece of good fortune, and so deep a dejection fell on him, as seriously to endanger his health. His patron here manifested the really kindly spirit by which he had been actuated; he entered into the feelings of the child, and removed him from the lordly mansion to the abode of a country clergyman in the neighborhood, who was passionately fond of children, and had none of his own. Under the truly paternal care of this excellent man, Fichte passed some of the happiest years of his life, and to its latest day looked back to them with tenderness and gratitude. The affectionate care of this amiable couple, who shared with him every little domestic pleasure, and treated him in every respect as if he had been indeed their son, was always remembered by him with the liveliest sensibility, and certainly exercised a most favorable influence on his character.

In this family, Fichte received his first instruction in the languages of antiquity, in which, however, he was left much to his own efforts, seldom receiving what might be called a regular lesson. This plan, though it undoubtedly invigorated and sharpened his faculties, left him imperfectly acquainted with grammar, and retarded, in some measure, his subsequent progress at *Schulporte*. His kind preceptor soon perceived the inefficiency of his own attainments for advancing the progress of so promising a pupil, and urged his patron to obtain for Fichte what appeared

to him the advantages of a high school. He was accordingly sent, first to Meissen, and afterwards to the seminary at Schulpforte.

There the system of fagging existed in full force, and with its usual consequences, tyranny on the one side, dissimulation and cunning on the other. Even Fichte, whose native strength of character in some measure guarded him from evil influences that might have been fatal to a mind of a feebler order, confesses that his life at Schulpforte was any thing but favorable to his integrity. He found himself gradually reconciled to the necessity of ruling his conduct by the opinion of the little community around him, and compelled to practice occasionally the same artifices as others, if he would not with all his talents and industry be always left behind.

Into this microcosm of contending forces the boy of thirteen, nurtured amidst lonely hills and silent forests, now found himself thrown. The monastic gloom of the buildings contrasted, at first, most painfully with the joyous freedom of fields and woods, where he had been accustomed to wander at will; but still more painfully, the solitude of the moral desert. Shy and shrinking within himself he stood, and the tears which furnished only subjects of mockery to his companions, were forced back, or taught to flow only in secret. Here, however, he learned the useful lesson of self-reliance, so well, though so bitterly taught by want of sympathy in those around us, and from this time to the close of his life it was never forgotten. It was natural that the idea of escape should occur to a boy thus circumstanced, but the dread of being retaken and brought back in disgrace to Schulpforte, occasioned hesitation. While brooding over this project, it happened that he met with a copy of *Robinson Crusoe*, and his enthusiasm, the enthusiasm of thirteen, was kindled into a blaze. The desert should be his dwelling-place! On some far-off island of the ocean, beyond the reach of men and the students of Schulpforte, he would pass golden days of freedom and happiness. It was a common boyish notion, but the manner in which

it was carried into execution, shows traces of the character of the individual. Nothing could have been easier than for him to have taken his departure unperceived on one of the days when the scholars were allowed to go to the playground; but he scorned to steal away in secret; he would have this step appear as the result of necessity and deliberate determination. He therefore made a formal declaration to his superior, a lad who had made a cruel and oppressive use of the brief authority intrusted him, that he would no longer endure the treatment he received, but would leave the place at the first opportunity. As may be supposed, the announcement was received with sneers and laughter, and Fichte now considered himself in all honor free to fulfil his resolution. It was easy to find an opportunity, and accordingly, having taken the precaution to study his proposed route on the map, he set off, and trudged on stoutly on the road to Naumberg. As he walked, however, he bethought himself of a saying of his beloved old pastor, that one should never begin an important undertaking without a prayer for Divine assistance; he turned, therefore, and kneeling down on a green hillock by the roadside, implored, in the innocent sincerity of his heart, the blessing of Heaven on his wanderings. As he prayed, it occurred to the new Robinson that his disappearance must occasion grief to his parents, and his joy in his wild scheme was gone in a moment. "Never, perhaps, to see his parents again!" This terrible thought suddenly presented itself with such force that he resolved to retrace his steps, and meet all the punishments that might be in store for him, "that he might look once more on the face of his mother."

On his return, he met those who had been sent in pursuit of him; for as soon as he had been missed, the "Obergesell" had given information of what had passed between them. When carried before the Rector, Fichte immediately confessed that he had intended to escape, and at the same time related the whole story with such straightforward simplicity and openness, that the Rector became interested for him, and not only remitted his

punishment, but chose for him, among the elder lads, another master, who treated him with the greatest kindness, and to whom he became warmly attached.

Fichte had become a *Candidatus Theologiæ* when his patron died, and with him died all hopes of being a clergyman. His prospects were gloomy in the extreme; but he was relieved from anxiety by being offered the situation of private tutor in a family in Switzerland. He soon after made acquaintance with Lavater and some other literary men. He also formed an attachment, which was to last him through life, with a niece of Klopstock.

Fichte's tutorship was remarkable. The parents of his pupils, although neither perfectly comprehending his plans, nor approving of that part which they did comprehend, were nevertheless such admirers of his moral character—they stood in such respectful awe of him—that they were induced to submit their own conduct with respect to their children to his judgment. We presume that all well-meaning tutors occasionally make suggestions to parents respecting certain points in their conduct towards the children; but Fichte's plan is, we fancy, quite unexampled in the history of such relations. He kept a journal which he laid before them every week, and in which he had noted the faults of conduct of which they had been guilty. This lets us into the secret of Fichte's firm and truthful character, as much as any thing we know about him. It was from such a soil that we might expect to find growing the moral doctrines which afterwards made his name illustrious. But this domestic censorship could not last long; it lasted for two years; and that it should have lasted so long is, as has been remarked, strong evidence of the respect in which his character was held. But it was irksome, insupportable, and ended at length in mutual dissatisfaction. He was forced to seek some other mode of subsistence. He went to Leipzig, where he gave private lessons in Greek and Philosophy, and became acquainted with the writings of Kant. This was an important event to him. Hear in what terms he speaks of it:

"I have been living, for the last four or five months, in Leipzig, the happiest life I can remember. I came here with my head full of grand projects, which all burst one after another, like so many soap-bubbles, without leaving me so much as the froth. At first this troubled me a little, and, half in despair, I took a step which I ought to have taken long before. Since I could not alter what was without me, I resolved to try to alter what was within. I threw myself into Philosophy—the Kantian, *videlicet*—and here I found the true antidote for all my evils, and joy enough into the bargain. The influence which this philosophy, particularly the ethical part of it (which, however, is unintelligible without a previous study of the *Kritik der reinen Vernunft*) has had upon my whole system of thought, the revolution which it has effected in my mind, is not to be described. To you especially I owe the declaration, that I now believe, with my whole heart, in free will, and that I see that under this supposition alone can duty, virtue, and morality have any existence. From the opposite proposition, of the necessity of all human actions, must flow the most injurious consequences to society; and it may, in fact, be in part the source of the corrupt morals of the higher classes which we hear so much of. Should any one adopting it remain virtuous, we must look for the cause of his purity elsewhere than in the innocuousness of the doctrine. With many it is their want of logical consequence in their actions.

"I am furthermore well convinced, that this life is not the land of enjoyment, but of labor and toil, and that every joy is granted to us but to strengthen us for further exertion; that the management of our own fate is by no means required of us, but only self-culture. I trouble myself, therefore, not at all concerning the things that are without; I endeavor not to appear, but to *be*. And to this, perhaps, I owe the deep tranquillity I enjoy; my external position, however, is well enough suited to such a frame of mind. I am no man's master, and no man's slave. As to prospects, I have none at all, for the constitution of the church here does not suit me, nor, to say the truth, that of the people

either. As long as I can maintain my present independence I shall certainly do so. I have been for some time working at an explanatory abridgment of Kant's *Kritik der Urtheilskraft* (Critical Inquiry into the Faculty of Judgment), but I am afraid I shall be obliged to come before the public in a very immature state, to prevent being forestalled by a hundred vamped-up publications. Should the child ever make its appearance, I will send it to you."*

It was in consequence of his admiration of Kant, that, after several ineffectual attempts to settle himself he went to Königsberg. Instead of a letter of introduction, Fichte presented Kant with a work, written in eight days, and which bore the title of *A Critique of every possible Revelation*. Kant at once recognized his peer, and received him warmly. But Kant himself, though celebrated, was neither rich nor influential. Fichte's affairs were desperate. We have his own confession in the fragment of a journal which he kept at the time.

"28th August.—I yesterday began to revise my *Critique*. In the course of my meditation some new and excellent ideas were excogitated, which convinced me that my work was superficial. I endeavored to carry out my investigation to-day; but my imagination led me so far away, that I could do nothing. I have reckoned my finances, and find that I have just enough to subsist on for a fortnight. It is true this is not the first time in my life that I have found myself in such an embarrassment, but I was then in my own country; besides, in growing older, one's sense of honor becomes more delicate, and distress is more and more of a hardship. . . . I have not been able to make any resolution. I certainly shall not speak on the subject to M. Borowsky, to whom Kant has given me an introduction. If I speak to any one, it shall be to Kant himself.

"1st Sept.—I have made a resolution which I must commu-

* It was never printed; probably because, as he here anticipates, he was forestalled.

nicate to Kant. A situation as tutor, however reluctantly I might accept it, does not even offer itself; while, on the other hand, the incertitude in which I am placed does not allow me to work. I must return home. I can perhaps borrow from Kant the small sum necessary for my journey. I went to him to-day for that purpose, but my courage failed me; I resolved to write to him.

“2d Sept.—I finished my letter to Kant, and sent it.

“3d Sept.—Received an invitation to dinner from Kant. He received me with his usual cordiality; but informed me that it would be quite out of his power to accede to my request for another fortnight. Such amiable frankness!

“I have done nothing lately; but I shall set myself to work, and leave the rest to Providence.

“6th Sept.—Dined with Kant, who proposed that I should sell the MS. of my *Critique* to Hartung the bookseller. ‘It is admirably written,’ said he, when I told him I was going to re-write it. Is that true? It is Kant who says so.

“12th Sept.—I wanted to work to-day; but could do nothing. How will this end? What will become of me a week hence? Then all my money will be gone.”

These extracts will not be read without emotion. They paint a curious picture in the life of our philosopher: a life which was little more than a perpetual and energetic combat.

The *Critique* was published anonymously, and gained immense applause; partly, no doubt, because it was generally mistaken for the production of Kant himself. The celebrity he acquired when the authorship was disclosed, was the means of procuring him the chair of Philosophy at Jena, the offer of which was made him towards the end of 1793.

Jena was then the leading University of Germany; and Fichte might flatter himself that at length he had a settled position, in which he might calmly develop his scientific views. But his was a Fighter’s destiny. Even here, at Jena, he found himself soon opposing and opposed. His endeavors to instil ■

higher moral feeling into the students—his anxiety for their better culture—only brought on him the accusation of endeavoring to undermine the religious institutions of his country; and his speculative views brought on him the charge of atheism.

Atheism is a grave charge, and yet how lightly made! The history of opinion abounds in instances of this levity; yet scarcely ever was a charge more groundless in appearance than that against Fichte, whose system was atheistic only in superficial appearance. Nevertheless the cry was raised, and he had to battle against it. It is understood that the Government would have been willing to overlook the publication of the work which raised this cry, if Fichte had made any sort of explanatory modification; but he would not hear of it, tendered his resignation, and soon afterwards found an asylum in Prussia, where he occupied the Chair at Erlangen, and afterwards at Berlin. From his career at Berlin we will select one incident typical of his character.

The students are assembled in crowds to hear their favorite professor, who is to lecture that day upon duty,—on that duty whose ideal grandeur his impassioned eloquence has revealed to them. Fichte arrives, calm and modest. He lectures with his usual dignified calmness, rising into fiery bursts of eloquence, but governed by the same marvellous rigor of logic as before. He leads them to the present state of affairs. On this topic he grows still more animated; the rolling of drums without frequently drowning his voice, and giving him fresh spirit. He points to the bleeding wounds of his country; he warms with hatred against oppressors; and enforces it as the duty of every one to lend his single arm to save his country.

"This course of lectures," he exclaims, "will be suspended till the end of the campaign. We will resume them in a free country, or die in the attempt to recover her freedom." Loud shouts respondent ring through the hall; clapping of hands and stamping of feet make answer to the rolling drums without; every German heart there present is moved, as at the sound of a

trumpet. Fichte descends; passes through the crowd; and places himself in the ranks of a corps of volunteers then departing for the army. It is the commencement of the memorable campaign of 1813.

In another year he was no more; he fell, not by a French bullet, but by the fever caught while tending his loved wife, who herself had fallen a victim to her attendance on unknown sufferers. On the 28th of January, 1814, aged fifty-two, this noble Fichte expired.

There are few characters which inspire more admiration than that of Fichte; we must all admire "that cold, colossal, adamantine spirit standing erect and clear, like a Cato Major among degenerate men; fit to have been the teacher of the Stoa, and to have discoursed of beauty and virtue in the groves of Academe! So robust an intellect, a soul so calm, so lofty, massive, and immovable has not mingled in philosophical discussion since the time of Luther. For the man rises before us amid contradiction and debate like a granite mountain amid clouds and winds. Ridicule of the best that could be commanded has been already tried against him; but it could not avail. What was the wit of a thousand wits to him? The cry of a thousand choughs assailing that old cliff of granite; seen from the summit, these, as they winged the midway air, showed scarce so gross as beetles, and their cry was seldom even audible. Fichte's opinions may be true or false; but his character as a thinker can be slightly valued only by those who know it ill; and as a man approved by action and suffering, in his life and in his death, he ranks with a class of men who were common only in better ages than ours."*

§ II. FICHTE'S HISTORICAL POSITION.

Kant's *Criticism*, although really leaving skepticism in possession of the field, was nevertheless believed to have indicated a

* Carlyle.

new domain, in which a refuge might be found. The thought soon suggested itself that on this domain an indestructible temple might be erected. Kant had driven the piles deep down into the earth—a secure foundation was made; but Kant had declined building.

Jacobi, for one, saw in the principles of “criticism” a path on which he could travel. He maintained, that just as Sense was, according to Kant, a faculty whereby we perceived material things, so also was Reason a sense, a faculty, whereby we perceive the supersensual.

It was indeed soon evident that men would not content themselves with the mere negation to which Kant had reduced our knowledge of things *per se*. It was the positive part of his system they accepted and endeavored to extend. This attempt forms the matter of all the subsequent history of German Philosophy till Hegel. We will briefly state the nature of the discussions which the result of Kant's system had rendered imperative.

Kant had postulated the existence of an object as the necessary correlate to a subject. Knowledge was both objective and subjective; but inasmuch as it was thus inseparably twofold it could never penetrate the essence of things—it could never know the object—it could only know phenomena. Hence the problem was:

What is the relation of object and subject?

To solve this, it was necessary to penetrate the essence of things, to apprehend noumena. All the efforts of men were therefore to be directed towards this absolute science. The ground of all certitude being in the *à priori* ideas, an attempt was made to construct *à priori* the whole system of human knowledge.

The Ego was the necessary basis of the new edifice. Consciousness, as alone certain, was proclaimed the ground upon which absolute science must rest.

Fichte's position is here clearly marked out. His sole object

was to construct a science out of consciousness, and thereon to found a system of morals.

Let us at the outset request the reader to give no heed to any of the witticisms which he may hear, or which may suggest themselves to him on a hasty consideration of Fichte's opinions. That the opinions are not those of ordinary thinkers, we admit; that they are repugnant to all "common sense," we must also admit; that they are false, we believe: but we also believe them to have been laborious products of an earnest mind, the consequences of admitted premises, drawn with singular audacity and subtlety, and no mere caprices of ingenious speculation—no paradoxes of an acute but trifling mind.

It was within him that he found a lamp to light him on his path. Deep in the recesses of his soul, beneath all understanding, superior to all logical knowledge, there lay a faculty by which truth, absolute truth, might be known.

"I have found the organ," he says in his *Bestimmung des Menschen*, "by which to apprehend all reality. It is not the understanding; for all knowledge supposes some higher knowledge on which it rests, and of this ascent there is no end. It is Faith, voluntarily reposing on views naturally presenting themselves to us, *because* through these views alone we can fulfil our destiny, which sees our knowledge, and pronounces that 'it is good,' and raises it to certainty and conviction. It is no knowledge, but a resolution of the will to admit this knowledge. This is no mere verbal distinction, but a true and deep one, pregnant with the most important consequences. Let me forever hold fast by it. All my conviction is but faith, and it proceeds from the will and not from the understanding; from the will also, and not from the understanding, must all the true culture proceed. Let the first only be firmly directed towards the Good, the latter will of itself apprehend the True. Should the latter be exercised and developed while the former remains neglected, nothing can come of it but a facility in vain and endless sophistical subtleties refining away into the absolutely void

inane. I know that every seeming truth, born of thought alone, and not ultimately resting on faith, is false and spurious; for knowledge, purely and simply such, when carried to its utmost consequences, leads to the conviction that we can know nothing! Such knowledge never finds any thing in the conclusions, which it has not previously placed in the premises by faith; and even then its conclusions are not always correct. . . . Every human creature born into the world has unconsciously seized on the reality which exists for him alone through this intuitive faith. If in mere knowledge—in mere perception and reflection—we can discover no ground for regarding our mental presentations as more than mere pictures, why do we all nevertheless regard them as more, and imagine for them a basis, a *substratum* independent of all modifications? If we all possess the capacity and the instinct to go beyond this natural view of things, why do so few of us follow this instinct, or exercise this capacity?—nay, why do we even resist with a sort of bitterness when we are urged towards this path? What holds us imprisoned in these natural boundaries? Not inferences of our reason; for there are none which could do this. It is our deep interest in reality that does this—in the good that we are to produce—in the common and the sensuous that we are to enjoy. From this interest can no one who lives detach himself, and just as little from the faith which forces itself upon him simultaneously with his existence. We are all born in faith, and he who is blind follows blindly the irresistible attraction. He who sees follows by sight, and believes because he will believe.”*

Here the limit set by Kant is overleaped: a knowledge of realities is affirmed. But it is not enough to affirm such a knowledge; we must prove it. To prove this is the mission of Philosophy.

Fichte, who thought himself a true Kantist, although Kant very distinctly and publicly repudiated him, declared that the

* We adopt the translation of Mrs. Percy Sinnett: *Destination of Man*, London, 1846.

materials for a science had been discovered by Kant; nothing more was needed than a systematic co-ordination of these materials: and this task he undertook in his famous Doctrine of Science (*Wissenschaftslehre*). In this he endeavored to construct *à priori* all knowledge.

§ III. BASIS OF FICHTE'S SYSTEM.

We are supposed to perceive external objects through the ideas which these objects excite in us. But this assumption is not warranted by the facts of consciousness. What is the fundamental fact? It is that I have in my mind a certain idea. This, and this only, is primitively given. When we leave this fact in quest of an explanation, we are forced to admit either that this idea is spontaneously evolved *by me*; or else some *not-me*—something different from myself—has excited it *in me*. Idealism or Dualism? choose between them.

Kant, unwilling to embrace idealism, and unable to conceive how the Ego spontaneously evolved within itself ideas of that which it regarded as different from itself, postulated the existence of a Non-Ego, but declared that we knew nothing of it. In this he followed Locke, and the majority of philosophers.

Truly, said Fichte, we know nothing of it; we can only know that which passes within ourselves. Only so much as we are *conscious* of can we know; but in consciousness there is no object given, there is only an idea given. Are we forced by the very laws of our reason to suppose that there is Non-Ego existing?—are we forced to assume that these ideas are images of something *out* of us and independent of us? To what does this dilemma bring us? Simply to this: that the very assumption, here called a necessary consequence of our mental constitution—this Non-Ego, which must be postulated, is, after all, nothing but a postulate of our reason; is therefore ■ *product of the Ego*. It is the Ego which thus *creates the necessity* for a Non-Ego; it is the Ego which thus, *answering to the necessity, creates the Non-Ego wanted*. Ideas, and nothing but ideas, are given in the

primitive fact of consciousness. These are the products of the *activity* of the Ego; and not, as is so commonly asserted, the products of the *passivity* of the Ego. The soul is no passive mirror reflecting images. It is an active principle creating them. The soul is no lifeless *receptivity*. Were it not brimming over with life and activity, perception would be impossible. One stone does not perceive another. A mould does not perceive the liquid that is poured into it.

Consciousness is in its very essence an activity. Well, then, if in its activity it produces images, and if by the laws of its nature it is forced to assume that these images have some substratum, what is this assumption but *another* form of the soul's activity? If the Ego is conscious of its changes, and yet is forced to attribute these changes to some external cause, what is this very act of assuming an external cause but *the pure act of the Ego?—another change in the consciousness?*

You admit that we cannot know *Substance*; all our knowledge is limited to *accidents*—to phenomena. But, you say, you are forced to assume a Substance as the basis of these accidents—a noumenon as that whereby phenomena are possible; and yet you cannot know this noumenon. Fichte answers: If you cannot know it, your assumption, as *the mere product of your reason*, is nothing more nor less than *another form of the activity of the Ego*. It is *you* who assume; and you assume *what* you call Substance. Substance is nothing but the *synthesis of accidents*. And it is a mental synthesis.

Thus Fichte founded Idealism upon the basis of consciousness, which was the admitted basis of all certitude; and he not only founded idealism, but reduced the Ego to an activity, and all *knowledge* to an *act*.

The activity of the Ego is of course an assumption, but it is the only assumption necessary for the construction of a science. That once admitted, the existence of the Non-Ego, as a product of the Ego, follows as a necessary consequence.

Every one will admit that $A = A$; or that *A is A*. This is

an axiom which is known intuitively, and has no need of proof. It is the proposition of absolute identity (*Satz der Identität*). It is absolutely true. In admitting this to be absolutely true, we ascribe to the mind a faculty of knowing absolute truth.

But in saying A equals A, we do not affirm the *existence* of A; we only affirm that *if* A exist, then it must equal A. And the axiom teaches us not that A exists; but there is a necessary relation between a certain *if* and *then*; and this necessary relation we will call X. But this relation, this X, is only *in* the Ego, comes only *from* the Ego. It is the Ego that judges in the preceding axiom that $A = A$; and it judges by means of X.

To reduce this to language a little less scholastic, we may say that, in every judgment which the mind makes, the act of judging is an act of the Ego.

But as the X is wholly in the Ego, so therefore is A *in* the Ego, and is posited *by* the Ego. And by this we see that there is *something* in the Ego which is forever one and the same, and that is the X. Hence the formula, "I am I: Ego = Ego."

We come here to the *Cogito, ergo sum*, of Descartes, as the basis of all certitude. The Ego posits itself, and *is* by means of this very self-positing. When I say "I am," I affirm, in consciousness, my existence; and this affirmation of my consciousness is the condition of my existence. The Ego is therefore at one and the same time both the activity and the product of activity; precisely as thought is both the thinking activity, and the product thought.

We will, for the present, spare the reader any further infliction of such logical abstractions. He will catch in the foregoing a glimpse of Fichte's method, and be in some way able to estimate the strength of the basis on which idealism reposes.

The great point Fichte has endeavored to establish is the identity of being and thought—of existence and consciousness—of object and subject. And he establishes this by means of the Ego considered as essentially an activity.

Hence the conclusion drawn in the practical part of his phi-

losophy, that the true destination of man is not thought, but action, which is thought realized. "I am free," he says. That is the revelation of consciousness. "I am free; and it is not merely my action, but the free determination of my will to obey the voice of conscience, that decides all my worth. More brightly does the everlasting world now rise before me; and the fundamental laws of its order are more clearly revealed to my mental sight. My *will alone*, lying hid in the obscure depths of my soul, is the first link in a chain of consequences stretching through the invisible realms of spirit, as in this terrestrial world the action itself, a certain movement communicated to matter, is the first link in a material chain of cause and effect, encircling the whole system. The will is the efficient cause, the living principle of the world of spirit, as motion is of the world of sense. I stand between two worlds, the one visible, in which the act alone avails, and the intention matters not at all; the other invisible and incomprehensible, acted on only by the will. In both these worlds I am an effective force. The Divine life, as alone the finite mind can conceive it, is self-forming, self-representing will, clothed, to the mortal eye, with multitudinous sensuous forms, flowing through me and through the whole immeasurable universe, here streaming through my veins and muscles,—there, pouring its abundance into the tree, the flower, the grass. The dead, heavy mass of inert matter, which did but fill up nature, has disappeared, and, in its stead, there rushes by the bright, everlasting flood of life and power, from its Infinite Source.

"The Eternal Will is the Creator of the world, as he is the Creator of the finite reason. Those who will insist that the world must have been created out of a mass of inert matter, which must always remain inert and lifeless, like a vessel made by human hands, know neither the world nor Him. The Infinite Reason alone exists in himself—the finite in him; in our minds alone has he created a world, or at least that by and through which it becomes unfolded to us. In his light we be-

hold the light, and all that it reveals. Great, living Will! whom no words can name, and no conception embrace! well may I lift my thoughts to thee, for I can think only in thee. In thee, the Incomprehensible, does my own existence, and that of the world, become comprehensible to me; all the problems of being are solved, and the most perfect harmony reigns. I veil my face before thee and lay my finger on my lips."

§ IV. FICHTE'S IDEALISM.

The ground-principle of Fichte's idealism having been given, we have now to see how he avoids the natural objections which rise against such a doctrine. But first let us notice how this deification of personality was at once the most natural product of such a mind as Fichte's, and the best adapted to the spirit of the age which produced it. His doctrine was an inspiration of that ardent and exalted spirit which stirred the heart of Germany, and made the campaign of 1813 an epoch in history. Germany then, as now, was most deficient in energetic will. It had armies, and these armies were headed by experienced generals. But among them there was scarcely another beyond the impetuous Blücher, who had steadfast will. They were beaten and beaten. At length they were roused. A series of insults had roused them. They rose to fight for fatherland; and in their ranks was Fichte, who by deed as well as doctrine sought to convince them that in Will lay man's divinity.

The question being, *What is the relation of Object and Subject?* and Fichte's solution being *Object and Subject are identical*, it followed from his position that inasmuch as an Object and a Subject—a Non-Ego and an Ego—were given in knowledge, and the distinction between them by all men supposed to be real, the origin of this distinction must arise in one of two ways: either the Ego must posit the Non-Ego, wilfully and consciously (in which case mankind would never suppose the distinction to be a real distinction); or else the *Ego must cause the Non Ego to be*, and must do so necessarily and unconsciously.

How does Fichte solve the problem? He assumes that the existence of the very Ego itself is *determined** by the Non-Ego; and in this way: To be, and to be conscious, are the same. The existence of the Ego depends upon its consciousness. But to be conscious of Self is at the same time to be conscious of Not-Self; the correlates Self and Not-Self are given in the same act of consciousness. But how is it that we attribute reality to Not-Self? Just as we attribute reality to Self, namely, by an act of Consciousness. Not-Self is given in Consciousness as a *reality*, and therefore we cannot suppose it to be a phantom.

We may pause here to remark how all the witticisms against Idealism fall to the ground. The wits assume that when it is said the World is produced by the Ego, this World must be held as a phantom. Now nobody ever believed that external objects had no reality; the only possible doubt is as to whether they have any reality *independent* of mind.

In consciousness we have a twofold fact, namely, the fact of Self, and the fact of Not-Self, indissolubly given in one. We conclude therefore that Consciousness—that the Ego—is partly self-determined, and partly determined by not-self. Let us suppose the entire reality of the Ego (that is, in its identity of Subject and Object) represented by the number ten. The Ego, conscious of five of its parts—or, to speak with Fichte—*positing* five, does by that very act posit five parts *negatively* in itself. But how is it that the Ego can posit a negation in itself? It does so by the very act of Consciousness; in the act of separating five from ten, the five remaining are left passive. The negation is therefore the passivity of the Ego. This seems to lead to the contradiction that the Ego, which was defined as an Activity, is at the same time active and passive. The solution

* The German word *bestimmen*, which we are forced to translate “to determine,” is of immense use to the metaphysicians; we would gladly have substituted some other equivalent, could we have found one to represent the meaning better. To determine, in philosophy, does not mean (as in ordinary language), to resolve, but to render definite. Chaos, when *determined*, is the created world.

of this difficulty is that it is Activity which determines Passivity and reciprocally. Let us suppose the absolute reality as a Sphere; this is entirely in the Ego, and has a certain quantity. Every quantity less than this totality, will, of necessity, be negation, passivity. In order that a less quantity should be compared with the totality and so opposed to it, it is necessary there should be some relation between them; and this is in the idea of divisibility. In the absolute totality, as such, there are no parts; but this totality may be compared with parts and distinguished from it. Passivity is therefore a determinate quantity of Activity, a quantity compared with the totality. In regard to the Ego as absolute, the Ego as limited is passive; in the relation of Ego as limited to the Non-Ego, the Ego is active and the Non-Ego passive. And thus are activity and passivity reciprocally determined.

The result of this and much more reasoning, is the hypothesis that when mankind attribute to objects a real existence they are correct; but they are incorrect in supposing that the Object is independent of the Subject: it is identical with the Subject. The common-sense belief is therefore correct enough. It is when we would rise above this belief, and endeavor to philosophize, that we fall into error. All the philosophers have erred, not in assuming the *reality* of objects, but in assuming the reality of *two* distinct, disparate existences, Matter and Mind; whereas we have seen that there is only one existence, having the twofold aspect of Object and Subject.

Nor is the distinction unimportant. If Dualism be accepted, we have no refuge from Skepticism. If we are to believe that *Dinge an sich* exist—that Matter exists independently of Mind, exists *per se*—then are we doomed to admit only a knowledge of phenomena as possible. The things in themselves we can never know; we can only know their effects upon us. Our knowledge is relative, and never can embrace the absolute truth.

But if Idealism be accepted, the ordinary belief of men is not only respected but confirmed; for this belief is that we *do* know

things in themselves, and that the things we know *do* exist. The Dualist forces you to admit that you *cannot* know things in themselves; and that your belief in their existence is merely the postulate of your Reason, and is not *immediately* given in the facts of Consciousness. The Idealist, on the contrary, gives you an *immediate* knowledge of things in themselves, consequently opens to you the domain of absolute Truth. He only differs from you in saying that these things, which you immediately know, are part and parcel of yourself; and it is *because* you and they are indissolubly united, that immediate knowledge is possible.

"But," says Realism, "I know that objects are altogether independent of *me*. I did not create them. I found them there, *out* of me. The proof of this is that if, after looking at a tree, I turn away, or shut my eyes, the image of the tree is annihilated, but the tree itself remains."

"No," answers Idealism, "the tree itself does not remain: for the tree is but a phenomenon, or collection of phenomena;—the tree is a Perception, and all perceptions are subjective. You suppose that every one must admit that our *perceptions* are different from their *objects*. But are they different? that is precisely the question at issue; and you assume it. Let us be cautious. What is an object—a tree for instance? Tell me, what does your Consciousness inform you of? Let me hear the fact, the whole fact, and no *inference* from the fact. Is not the *object* (tree) one and the same as your *perception* (tree)? Is not the tree a mere name for your perception? Does not your Consciousness distinctly tell you that the Form, Color, Solidity, and Smell of the Tree are *in you*—are affections of your Subject?"

"I admit that," replies Realism; "but although these are *in me*, they are caused by something *out of me*. Consciousness tells me that very plainly."

"Does it so? I tell you that Consciousness has no such power. It can tell you of its own changes; it cannot trans-

cend itself to tell you any thing about that which causes its changes."

"But I am irresistibly compelled to believe," says Realism, "that there are things which exist *out* of me; and this belief, because irresistible, is true."

"Stop! you run on too fast," replies Idealism; "your belief is not what you describe it. You are not irresistibly compelled to believe that things exist, which said things lie *underneath* all their appearances, and must ever remain unknown. This is no instinctive belief; it is a philosophic inference. Your belief simply is, that certain things, colored, odorous, extended, sapid, and solid, exist; and so they do. But you infer that they exist *out* of you? Rash inference. Have you not admitted that color, odor, taste, extension, etc., are but modifications of your sentient being; and if they exist *in* you, how can they exist *out* of you? They do not: they seem to do so by a law of the mind which gives objectivity to our sensations."*

"Try your utmost to conceive an object as any thing more than a synthesis of perceptions. You cannot. You may infer, indeed, that a *substratum* for all phenomena exists, although unknown, unknowable. But on what is your inference grounded? On the impossibility of conceiving the existence of qualities—extension, color, etc.—apart from some substance *of which* they are qualities. This impossibility is a figment. The qualities have no need of an objective substratum, because they have a *subjective* substratum: they are the modifications of a sensitive subject; and the synthesis of these modifications is the only substratum of which they stand in need. This may be proved in another way. The qualities of objects, it is universally admitted, are but modifications of the subject: these qualities are *attributed* to external objects; they are dependent upon the subject

* The difference between Berkeley and Fichte is apparent here. The former said that the objects *did* exist independent of the Ego, but did *not* exist independent of the universal Mind. Fichte's Idealism was *Egoism*; Berkeley's was a theological Idealism.

for their existence; and yet, to account for their existence, it is asserted that some unknown external something must exist as a substance in which they must inhere. Now, it is apparent that, inasmuch as these qualities are subjective and dependent upon the subject for their existence, there can be no necessity for an object in which they must inhere." Thus may Idealism defend itself against Realism.

We have made ourselves the advocates of Fichte's principles, but the reader will not mistake us for disciples of Fichte. In the exposition of his system we have, for obvious reasons, generally avoided his own manner, which is too abstract to be followed without difficulty, and we have endeavored to state his ideas in our own way. To exhibit Fichte's Idealism is, strictly speaking, all that our plan imposes on us; but although his philosophical doctrines are all founded upon it, and although it was the doctrine which made an epoch in German Philosophy, consequently the doctrine which entitles him to a place in this History, nevertheless we should be doing him injustice and misleading our readers, if we did not give some glimpse of his moral system. The Idealism, as Idealism, seems little better than an ingenious paradox: only when we see it applied can we regard it as serious.*

§ V. APPLICATION OF FICHTE'S IDEALISM.

The Ego is essentially an Activity; consequently free. But this free activity would lose itself in infinity, and would remain without consciousness—in fact, without existence—did it not

* Those who are curious to see what he himself makes of his system, are referred to his *Wissenschaftslehre* (of which a French translation by M. Paul Grimblot exists, under the title of *Doctrines de la Science*), or, as a more popular exposition, to his *Bestimmung des Menschen*, a French translation of which has been published by M. Barchou de Penhoen, under the title *Destination de l'Homme*, which, from the character and learning of the translator, is, we have no doubt, an excellent version. An English translation has also been made by Mrs. Percy Sinnett, which can be recommended. Fichte's work, *The Nature of the Scholar*, has also recently appeared, by Mr. W. Smith, who has also translated the *Characteristics of the Present Age*.

encounter some *resistance*. In the effort to vanquish this resistance, it exerts its will, becomes conscious of something not itself, and *thereby* becomes conscious of itself. But resistance limits freedom, and as an Activity the Ego is essentially free—it is irresistibly impelled to enjoy perfect freedom. This expansive force, which impels the Ego to realize itself by complete development, and thereby assimilating the Non-Ego—this force, in as far as it is not realized, is the *aim* of man's existence—it is his duty.

Here a difference from the ordinary schools of morality begins to show itself. Duty is not a moral obligation which we are free to acknowledge or reject; it is a pulse beating in the very heart of man—a power inseparable from his constitution; and according to its fulfilment is the man complete.

The world does not exist because we imagine it, but because we *believe* it. Let all reality be swept away by skepticism—we are not affected. Man is impelled by his very nature to realize his existence by his acts. Our destination is not thought, but action. Man is not born to brood over his thoughts, but to manifest them—to give them existence. There is a moral world *within*; our mission is to transport it *without*. By this we create the world. For what is the condition of existence?—what determines Thought to *be*? Simply that it should realize itself as an object. The Ego as *simple Subject* does not exist; it has only a potentiality of existence. To exist, it must realize itself and become *Subject-Object*.

Mark the consequence: Knowing that we carry within us the moral world, and that upon ourselves alone depends the attainment of so sublime an object as the manifestation of this world, it is to ourselves alone that we must direct our attention. This realization of the world, what is it but the complete development of ourselves? If we would *be*, therefore—if we would enjoy the realities of existence, we must develop ourselves in the attempt to incessantly realize the beautiful, the useful, and the good. Man is commanded to be moral by the imperious necessity of his own nature. To be virtuous is not to obey some external

law, but to fulfil an internal law : this obedience is not slavery, but freedom ; it is not sacrificing one particle of freedom to any other power, but wholly and truly realizing the power within us of being free.

Life is a combat. The free spirit of man, inasmuch as it is finite, is limited, imperfect ; but it incessantly struggles to subjugate that which opposes it—it tends incessantly towards infinity. Defeated in his hopes, he is sometimes discouraged, but this lasts not long. There is a well-spring of energy forever vital in the heart of man ; an ideal is forever shining before him, and that he must attain.

Man knows himself to be free ; knows also that his fellow-men are free ; and therefore the duty of each is to treat the others as beings who have the same aim as himself. Individual liberty is therefore the principle of all government : from it Fichte deduces his political system.

And what says Fichte respecting God ? He was, as we know, accused of atheism. Let us hear his real opinions. In his answer to that charge we have an abstruse, but at the same time positive, exposition of his views.* God created the world out of an inert mass of matter ; and from the evidence of design in this created world we infer an intelligent designer. This is the common view ; but Fichte could not accept it. In the first place, what we call the World is but the incarnation of our Duty (*unsere Welt ist das versinnlichte Material unserer Pflicht*). It is the objective existence of the Ego : we are, so to speak, the creators of it. Such a statement looks very like atheism, especially when Fichte's system is not clearly apprehended : it is, however, at the worst, only Acosmism.

Nor could Fichte accept the evidence of Design, because Design is a mere conclusion of the understanding, applicable only to finite, transient things, wholly inapplicable to the infinite : Design itself is but a subjective notion.†

* *Gerichtliche Verantwortungsschriften gegen die Anklage des Atheismus.*

† *Ibid.*, p. 43.

"God," says Fichte, "must be *believed* in, not *inferred*. Faith is the ground of all conviction, scientific or moral. Why do you believe in the existence of the world? it is nothing more than the incarnation of that which you carry within you, yet you believe in it. In the same way God exists in your Consciousness, and you believe in him. He is the Moral Order (*moralische Ordnung*) of the world: as such we can know him, and only as such. For if we attempt to attribute to him Intelligence or Personality, we at once necessarily fall into anthropomorphism. God is infinite: therefore beyond the reach of our *science*, which can only embrace the finite, but not beyond our *faith*."*

By our efforts to fulfil our Duty, and thus to realize the Good and Beautiful, we are tending towards God, we live in some measure the life of God. True religion is therefore the realization of universal reason. If we were all perfectly free, we should be one; for there is but one Liberty. If we had all the same convictions, the law of each would be the law of all, since all would have but one Will. To this we aspire; to this Humanity is tending.

The germ of mysticism which lies in this doctrine was fully developed by some of Fichte's successors, although he himself had particularly guarded against such an interpretation, and distinguishes himself from the mystics.

Let us now pass to Fichte's Philosophy of History.

The historian only accomplishes half of the required task. He narrates the events of an epoch, in their order of occurrence, and in the form of their occurrence; but he cannot be assured that he has not omitted some of these events, or that he has given them their due position and significance. The philosopher must complete this incomplete method. He must form some idea of the epoch—an Idea *à priori*, independent of experience. He must then exhibit this Idea always dominant throughout the

* *Sittenlehre*, pp. 189, 194.

epoch—and manifesting itself in all the multiplicity of facts, which are but its incarnation. What is the world but an incarnation of the Ego? What is an epoch but an incarnation of an Idea?

Every epoch has therefore its pre-existent Idea. And this Idea will be determined by the Ideas of the epochs which have preceded it; and will determine those which succeed it. Hence we conclude that the evolutions of Ideas—or the History of the World—is accomplished on a certain *plan*. The philosopher must conceive this plan in its totality, that he may from it deduce the Ideas of the principal epochs in the history of Humanity, not only as past, but as future.

The question first to be settled is this: What is the ground-plan of the world? or, in other words, according to Fichte, What is the fundamental Idea which Humanity has to realize?

The answer is: The Idea of Duty. This, in its concrete expression, is: To fix the relations of man to man in such order that the perfect liberty of each be compatible with the liberty of the whole.

History may thus be divided into two principal epochs. The one, in which man has not established the social relations on the basis of reason. The other, in which he has established them, and knows that he has done so.

That Humanity exists but for the successive and constant realization of the dictates of reason is easily proved. But sometimes Humanity has knowledge of what it performs, and why it performs it; sometimes it obeys but a blind impulse. In this second case, that is to say, in the first epochs of the terrestrial existence of Humanity, Reason, although not manifesting itself distinctly, consciously, nevertheless exists. It manifests itself as an instinct, and appears under the form of a natural law; it manifests itself in the intelligence only as a vague and obscure sentiment. Reason, on the contrary, no sooner manifests itself as Reason, than it is gifted with consciousness of itself and its acts. This constitutes the second epoch.

But Humanity does not pass at once from the first to the second epoch. At first Reason only manifests itself in a few men, the Great Men of their age, who thereby acquire authority. They are the instructors of their age; their mission is to elevate the mass up to themselves. Thus Instinct diminishes, and Reason supervenes. Science appears. Morality becomes a science. The relations of man to man become more and more fixed in accordance with the dictates of reason.

The entire life of Humanity has five periods. I. The domination of Instinct over Reason: this is the primitive age. II. The general Instinct gives place to an external dominant Authority: this is the age of doctrines unable to convince, and employing force to produce a blind belief, claiming unlimited obedience: this is the period in which Evil arises. III. The Authority, dominant in the preceding epoch, but constantly attacked by Reason, becomes weak and wavering: this is the epoch of skepticism and licentiousness. IV. Reason becomes conscious of itself; truth makes itself known; the science of Reason develops itself: this is the beginning of that perfection which Humanity is destined to attain. V. The science of Reason is applied; Humanity fashions itself after the ideal standard of Reason: this is the epoch of Art, the last term in the history of our species.

This brief outline of Fichte's system will be sufficient to assign him his place in the long line of European thinkers who have worked, with such perseverance, the glittering mine of Metaphysics; and sufficient also, we trust, not only to stimulate the curiosity of such readers whose studies lie in that direction, but also to furnish them with a general view capable of rendering the details intelligible.

CHAPTER II.

SCHELLING.

§ I. LIFE OF SCHELLING.

FREDERICK WILLIAM JOSEPH SCHELLING was born in Leonberg, in Würtemberg, 27th of January, 1775. At the University in Tübingen he first knew Hegel, and their friendship was enduring and productive. At Leipzig he studied Medicine and Philosophy; in the latter he became the pupil of Fichte. He afterwards filled Fichte's vacant chair at Jena, where he lectured with immense success. In 1807 he was made a member of the Munich Academy of Sciences. And in Bavaria, honored, rewarded, and ennobled, he remained till 1842, when the King of Prussia seduced him to Berlin; and there, in the chair once held by Hegel, he opened a series of lectures, in which he was to give the fruit of a life's meditation.

His appearance at Berlin was the signal for violent polemics. The Hegelians were all up in arms. Pamphlets, full of personalities and dialectics, were launched against Schelling, apparently without much effect. His foes at length grew weary of screaming; and he continued quietly to lecture. In 1845, the writer of this work had the gratification not only of hearing him lecture on Mythology to large audiences, but also of hearing him in the expansiveness of private conversation pour forth his stores of varied knowledge. His intellectual vigor was such, that although seventy summers had whitened his hair, he seemed to have still a long lease of life; and indeed he continued nine years longer to inspire the respect of all who knew him. He died on the 20th August, 1854.

§ II. SCHELLING'S DOCTRINES.

Schelling is often styled the German Plato. In such parallels there is always some truth amidst much error. Schelling's works unquestionably exhibit great power of vivid imagination conjoined with subtle dialectics; if on this ground he is to be styled a Plato, then are there hundreds to share that title with him. His doctrines have little resemblance to those of his supposed prototype. Curiously enough, his head was marvellously like that of Socrates; not so ugly, but still very like it in general character.

Schelling may be regarded as having been the systematizer of a tendency, always manifesting itself, but then in full vigor in Germany—the tendency towards Pantheism. This tendency is not merely the offspring of Mysticism. It may be recognized in the clear Goethe, no less than in the mystical Novalis. In some way or other, Pantheism seems the natural issue of almost every Philosophy of Religion, when rigorously carried out; but Germany, above all European countries, has, both in poetry and speculation, the most constantly reproduced it. Her poets, her artists, her musicians, and her thinkers, have been more or less Pantheists. Schelling's attempt, therefore, to give Pantheism a scientific basis, could not but meet with hearty approbation.

We may here once more notice the similarity, in historical position, of the modern German speculations to those of the Alexandrian Schools. In both, the incapacity of Reason to solve the problems of Philosophy is openly proclaimed; in both, some higher faculty is called in to solve them. Plotinus called this faculty *Ecstasy*. Schelling called it the *Intellectual Intuition*. The Ecstasy was not supposed to be a faculty possessed by all men, and at all times; it was only possessed by the few, and by them but sometimes. The Intellectual Intuition was not supposed to be a faculty common to all men; on the contrary, it was held as the endowment only of a few of the privileged: it was the faculty for philosophizing. Schelling expresses his dis-

dain for those who talk about not comprehending the highest truths of Philosophy. "Really," he exclaims, "one sees not wherefore Philosophy should pay any attention whatever to Incapacity. It is better rather that we should isolate Philosophy from all the ordinary routes, and keep it so separated from ordinary knowledge, that none of these routes should lead to it. Philosophy commences where ordinary knowledge terminates."* The highest truths of science cannot be proved, they must be apprehended; for those who cannot apprehend them there is nothing but pity; argument is useless.

After this, were we to call Schelling the German Plotinus, we should perhaps be nearer the truth than in calling him the German Plato. But it was for the sake of no such idle parallel that we compared the fundamental positions of each. Our object was to "point a moral," and to show how the same forms of error reappear in history, and how the labors of so many centuries have not advanced the human mind in this direction one single step.

The first point to be established is the nature of Schelling's improvement upon Fichte: the relation in which the two doctrines stand to each other.

Fichte's Idealism was purely subjective Idealism. The Object had indeed reality, but was solely dependent upon the Subject. Endeavor as we might, we could never separate the Object from the Subject, we could never conceive a possible mode of existence without being forced to identify with it a Subject. Indeed the very conception itself is but an act of the Subject. Admitting that we are forced by the laws of our mental constitution to postulate an unknown something, a Noumenon, as the substance in which all phenomena inhere, what, after all, is this postulate? It is an act of the Mind; it is wholly subjective; the necessity for the postulate is a mental necessity. The Non-Ego therefore is the product of the Ego.

* *Neue Zeitschrift für Speculative Physik*, ii. 34.

There is subtle reasoning in the above ; nay more, it contains a principle which is irrefutable : the principle of the identity of Object and Subject in knowledge.* This Schelling adopted. Nevertheless, in spite of such an admission, the nullity of the external world was too violent and repulsive a conclusion to be long maintained ; and it was necessary to see if the principle of identity might not be preserved, without forcing such a conclusion.

The existence of the objective world is as firmly believed in as the existence of the subjective : they are, indeed, both given in the same act. We cannot be conscious of our own existence without at the same time inseparably connecting it with some other existence from which we distinguished ourselves. So in like manner we cannot be aware of the existence of any thing out of ourselves without at the same time inseparably connecting with it a consciousness of ourselves. Hence we conclude that both exist ; not indeed separately, not independently of each other, but *identified* in some higher power. Fichte said that the Non-Ego was created by the Ego. Schelling said that the two were equally real, and that both were identified in the Absolute.

Knowledge must be knowledge of something. Hence Knowledge implies the correlate of Being. Knowledge without an Object known, is but an empty form. But Knowledge and Being are correlates ; they are not separable ; they are identified. It is as impossible to conceive an Object known without a Subject knowing, as it is to conceive a Subject knowing without an Object known.

Nature is Spirit visible ; Spirit is invisible Nature :† the absolute Ideal is at the same time the absolute Real.

* This is the stronghold of Idealism, and we consider it impregnable, so long as men reason on the implied assumption, that whatever is true in human knowledge is equally true (*i. e.* actually so co-ordinated) in *fact* ; that as things appear *to us* so they are *per se*. And yet without this assumption Philosophy is impossible.

† Our readers will recognize here a favorite saying of Coleridge, many

Hence Philosophy has two primary problems to solve. In the *Transcendental Philosophy* the problem is to construct Nature from Intelligence—the Object from the Subject. In the *Philosophy of Nature* the problem is to construct Intelligence from Nature—the Subject from the Object.* And how are we to construct one from the other? Fichte has taught us to do so by the principle of the identity of Subject and Object, whereby the productivity and the product are in constant opposition, yet always one. The productivity (*Thätigkeit*) is the activity in act; it is the force which develops itself into all things. The product is the activity arrested and solidified into a fact; but it is always ready to pass again into activity. And thus the world is but a balancing of contending powers within the sphere of the Absolute.

In what, then, does Schelling differ from Fichte, since both assert that the product (Object) is but the arrested activity of the Ego? In this: the Ego in Fichte's system is a finite Ego—it is the human soul. The Ego in Schelling's system is the Absolute—the Infinite—the All, which Spinoza called Substance; and this Absolute manifests itself in two forms: in the form of the Ego and in the form of the Non-Ego—as Nature and as Mind.

The Ego produces the Non-Ego, but not by its own force, not out of its own nature; it is the universal Nature which works within us and which produces from out of us; it is universal Nature which here in us is conscious of itself. The souls of men are but the innumerable individual eyes with which the Infinite World-Spirit beholds himself.

What is the Ego? It is one and the same with the act which renders it an Object to itself. When I say "myself"—when I form a conception of my Ego, what is that but the Ego making

of whose remarks, now become famous, are almost *verbatim* from Schelling and the two Schlegels.

* *System des Transcendentalen Idealismus*, p. 7

itself an Object? Consciousness therefore may be defined the objectivity of the Ego. Very well; now apply this to the Absolute. He, too, must be conscious of himself, and for that he must realize himself objectively. We can now understand Schelling when he says, "The blind and unconscious products of Nature are nothing but unsuccessful attempts of Nature to make itself an Object (*sich selbst zu reflectiren*); the so-called dead Nature is but an unripe Intelligence. The acme of its efforts—that is, for Nature completely to objectize itself—is attained through the highest and ultimate degree of reflection in Man—or what we call *Reason*. Here Nature returns into itself, and reveals its identity with that which in us is known as the Object and Subject."*

The function of Reason is elsewhere more distinctly described as the total *indifference-point* of the subjective and objective. The Absolute he represents by the symbol of the magnet. Thus, as it is the same principle which divides itself in the magnet into the north and south poles, the centre of which is the indifference-point, so in like manner does the Absolute divide itself into the Real and Ideal, and holds itself in this separation as absolute indifference.† And as in the magnet every point is itself a magnet, having a North pole, a South pole, and a point of indifference, so also in the Universe, the individual varieties are but varieties of the eternal One. Man is a microcosm.

Reason is the indifference-point. Whoso rises to it, rises to the *reality* of things (*zum wahren Ansich*), which reality is precisely in the indifference of Object and Subject. The basis of Philosophy is therefore the basis of Reason; its knowledge is a knowledge of things as they are, *i. e.* as they are in Reason.‡

The spirit of Plotinus revives in these expressions. We have in them the whole key-stone of the Alexandrian School. The

* *System des Transcendentalen Idealismus*, p. 5.

† Hence Schelling's philosophy is often styled the Indifference Philosophy.

‡ *Zeitschrift für Speculative Physik*, vol. ii. heft 2.

Intellectual Intuition by which we are to embrace the Absolute, is, as before remarked, but another form of the Alexandrian Ecstasy. Schelling was well aware that the Absolute, the Infinite as such, could not be known under the conditions of finity, cannot be known in personal consciousness. How, then, can it be known? By some higher faculty which discerns the identity of Object and Subject—which perceives the Absolute as Absolute, where all difference is lost in indifference.

There are three divisions in Schelling's system: the philosophy of Nature, the transcendental philosophy, and the philosophy of the Absolute.

His speculations with respect to Nature have met with considerable applause in Germany. Ingenious they certainly are, but vitiated in Method; incapable of verification. Those who are curious to see what he makes of Nature are referred to his *Zeitschrift für speculative Physik*, and his *Ideen zu einer Philosophie der Natur*. The following examples will serve to indicate the character of his speculations.*

Subject and Object being identical, the absolute Identity is the absolute totality named Universe. There can be no difference except a *quantitative* difference; and this is only conceivable with respect to individual existences. For the absolute Identity is *quantitative indifference* both of Object and Subject, and is only under this form. If we could behold all that is, and behold it in its totality, we should see a perfect quantitative equality. It is only in the scission of the Individual from the Infinite that quantitative difference takes place. This difference of Object and Subject is the ground of all finity; and, on the other hand, quantitative indifference of the two is Infinity.

That which determines any difference is a Power (*Potenz*), and the Absolute is the Identity of all Powers (*aller Potenzen*).

* The reader must not complain if he do not understand what follows: intelligibility is not the characteristic of German speculation; and we are here only translating Schelling's words, without undertaking to enlighten their darkness.

All matter is originally liquid; *weight* is the power through which the Attractive and Expansive force, as the immanent ground of the reality of Matter, operates. Weight is the first *Potenz*. The second *Potenz* is Light—an inward intuition of Nature, as weight is the outward intuition. Identity with Light is Transparency. Heat does not pertain to the nature of Light, but is simply a *modus existendi* of Light. Newton's speculations upon Light are treated with disdain, as a system built upon illogical conclusions, a system self-contradictory, and leading to infinite absurdities. Nevertheless this absurd system has led men to many discoveries: it is the basis of a gradually advancing science; while the views of Schelling lead to nothing except disputation. So with his explanation of Electricity: let us suppose it exact, and we must still acknowledge it to be useless. It admits of no verification; admits of no application. It is utterly sterile.

There are, indeed, general ideas in his *Natur-philosophie*, which not only approach the conceptions of positive science, but have given a powerful stimulus to many scientific intellects. The general law of polarity, for example, which he makes* the law of universal nature, is seen illustrated in physics and chemistry; although the presumed relation between heat and oxygen, which he makes the basis of all atomic changes, no chemist will nowadays accept. When, in the second part of this treatise, he theorizes on organic life, the result is similar—namely, some general ideas which seem luminous are enforced by particular ideas certainly false. He maintains that vegetation and life are the products of chemical action: the first consisting in a continual deoxidation, the second in a continual oxidation; as soon as this chemical action ceases, death supervenes, for living beings exist only in the moment of *becoming*.† He only expresses the universally accepted idea of life when he makes it depend on the incessant disturbance and re-establishment of an equilibrium,‡ or,

* *Von der Weltseele*, p. 25, sq.

† *Ibid.*, p. 181.

‡ *Ibid.*, p. 284.

as De Blainville defines it, "a continual movement of decomposition and recomposition."

All the functions of Life are but the individualizations of one common principle; and all the series of living beings are but the individualizations of one common Life: this is the *Weltseele*, or *anima mundi*. The same idea had been expressed by Goethe, and has since been presented, under various forms, by Oken and many German naturalists. The idea of a dynamic progression in Nature, is also the fundamental idea in Hegel's philosophy.

Schelling, in his *Jahrbücher der Medicin*, says that Science is only valuable in as far as it is *speculative*; and by speculation he means the contemplation of God as He exists. Reason, inasmuch as it affirms God, cannot affirm any thing else, and annihilates itself at the same time as an *individual* existence, as any thing *out of* God. Thought (*das Denken*) is not my Thought; and Being is not my Being; for every thing belongs to God or the All. There is no such thing as a Reason which *we have*; but only a Reason that *has us*. If nothing exists out of God, then must the knowledge of God be only the infinite knowledge which God has of himself in the eternal Self-affirmation. God is not the highest, but the only One. He is not to be viewed as the summit or the end, but as the centre, as the All in All. Consequently there is no such thing as a being lifted up to the knowledge of God; but the knowledge is *immediate* recognition.

If we divest Schelling's speculations of their dialectical forms, we shall arrive at the following results:

Idealism is one-sided. Beside the Subject there must exist an Object: the two are identical in a third, which is the Absolute. This Absolute is neither Ideal nor Real—neither Mind nor Nature—but both. This Absolute is God. He is the All in All; the eternal source of all existence. He realizes himself under one form, as an objectivity; and under a second form as a subjectivity. He becomes conscious of himself in man: and this man, under the highest form of his existence, manifests Reason, and by this Reason God knows himself. Such are the conclu

sions to which Schelling's philosophy leads us. And now, we ask, in what does this philosophy differ from Spinozism?

The Absolute, which Schelling assumes as the indifference-point of Subject and Object, is but the *πρῶτον ἀγαθόν* and primal Nothing, which forms the first Hypostasis of the Alexandrian Trinity. The Absolute, as the Identity of Subject and Object, being neither and yet both, is but the Substance of Spinoza, whose attributes are Extension and Thought.

With Spinoza also he agreed in giving only a phenomenal reality to the Object and Subject. With Spinoza he agreed in admitting but one existence—the Absolute.

But, although agreeing with Spinoza in his fundamental positions, he differed with him in Method, and in the applications of those positions. In both differences the superiority, as it seems to me, is incontestably due to Spinoza.

Spinoza deduced his system very logically from one fundamental assumption, viz. that whatever was true of ideas was true of objects. This assumption itself was not altogether arbitrary. It was grounded upon the principle of certitude, which Descartes had brought forward as the only principle which was irrefragable. Whatever was found to be distinct and *à priori* in Consciousness, was irresistibly true. Philosophy was therefore deductive; and Spinoza deduced his system from the principles laid down by Descartes.

Schelling's Method was very different. Aware that human knowledge was necessarily finite, he could not accept Spinoza's Method, because that would have given him only a knowledge of the finite, the conditioned; and such knowledge, it was admitted, led to skepticism. He was forced to assume another faculty of knowing the truth, and this was the Intellectual Intuition. Reason which could know the Absolute, was only possible by transcending Consciousness and sinking into the Absolute. As Knowledge and Being were Identical, to know the Infinite, we must *be* the Infinite, *i. e.* must lose our individuality in the universal.

Consciousness, then, which had for so long formed the basis of all Philosophy, was thrown over by Schelling, as incompetent to solve any of its problems. Consciousness was no ground of certitude. Reason was the organ of Philosophy, and Reason was *impersonal*. The Identity of Being and Knowing took the place of Consciousness, and became the basis of all speculation. We shall see to what it led in Hegel.

Our notice of Schelling has necessarily been brief, not because he merited no greater space, but because to have entered into details with any satisfaction, would have carried us far beyond our limits. His works are not only numerous, but differ considerably in their views. All we have endeavored to represent is the ideas which he produced as developments of Fichte, and which served Hegel as a basis.*

CHAPTER III.

HEGEL.

§ I. LIFE OF HEGEL.

GEORGE FREDERICK WILLIAM HEGEL was born at Stuttgart, the 27th of August, 1770. He received that classical education which distinguished the Wirtembergian students beyond all others; and in his eighteenth year he went to Tübingen, to pursue his theological and philosophical studies. He was there a fellow-student with Schelling, for whom he contracted great esteem. The two young thinkers communicated to each other their thoughts, and discussed their favorite systems. In after-

* A French translation of Schelling's most important work, under the title of *Système de l'Idéalisme transcendantal*, by P. Grimblot, the translator of Fichte, has appeared; also a version of *Bruno; ou, Les Principes des Choses*.

life, when opposition had sundered these ties, Hegel never spoke of this part of their connection without emotion. In his twentieth year he had to give up all his plans for a professorship, and was content (hunger impelling) to accept the place of a private tutor, first in Switzerland, and subsequently in Frankfort.

Early in 1801 his father died; and the small property he inherited enabled him to relinquish his tutorship, and to move to Jena, where he published his dissertation *De Orbitis Planetarum*. This work was directed against the Newtonian system of Astronomy. It was an application of Schelling's Philosophy of Nature; and in it Newton was treated with that scorn which Hegel never failed to heap upon Empirics, *i. e.* those who trusted more to experience than to logic. In the same year he published his *Difference between Fichte and Schelling*, in which he sided with the doctrines of his friend, whom he joined in editing the *Critical Journal of Philosophy*. It is in the second volume of this Journal that we meet with his celebrated essay *Glauben und Wissen* (Faith and Knowledge), in which Kant, Jacobi, and Fichte are criticised.

At Jena he enjoyed the society of Goethe and Schiller. The former, with his usual sagacity, detected the philosophical genius which as yet lay undeveloped in Hegel; of which more may be read in Goethe and Schiller's *Correspondence*. Hegel, on the other hand, was to the last one of Goethe's staunchest admirers; and many a gleam of lustre is shed over the pages of the philosopher by the frequent quotations of the poet.

At the University of Jena, Hegel then held the post of *Privat-docent*; but his lectures had only four listeners. These four, however, were all remarkable men: Gabler, Troxler, Lachmann, and Zellmann. On Schelling's quitting Jena, Hegel filled his chair; but filled it only for one year. Here he published his *Phänomenologie des Geistes*. He finished writing this work on the night of the ever-memorable battle of Jena. While the artillery was roaring under the walls, the philosopher was deep in his work, unconscious of all that was going on. He continued writing, as

Archimedes at the siege of Syracuse continued his scientific researches. The next morning, manuscript in hand, he steps into the streets, proceeding to his publisher's, firmly convinced that the interests of mankind are bound up with that mass of writing which he hugs so tenderly. The course of his reverie is somewhat violently interrupted; bearded and gesticulating French soldiers arrest the philosopher, and significantly enough inform him that, for the present, the interests of men lie elsewhere than in manuscripts. In spite of French soldiers, however, the work in due time saw the light, and was welcomed by the philosophical world as a new system—or rather as a new modification of Schelling's system. The editorship of the Bamberg newspaper was then offered him, and he quitted Jena. He did not long remain at Bamberg; for in the autumn of 1808 we find him Rector of the Gymnasium College at Nürnberg. He shortly after married Fräulein von Tucher, with whom he passed a happy life, and who bore him two sons. In 1816 he was called to the chair of Heidelberg, and published in 1817 his *Encyclopädie der Philos. Wissenschaften*, which contains an outline of his system. This work so exalted his reputation that in 1818 he was called to the chair of Berlin, then the most important in Germany. He there lectured for thirteen years, and formed a school, of which it is sufficient to name its members Gans, Rosenkranz, Michelet, Werder, Marheinecke, and Hotho.

Hegel was seized with cholera in 1831, and after a short illness expired, in the sixty-second year of his age, on the 24th of November, the anniversary of the death of Leibnitz.

§ II. HEGEL'S METHOD.

Schelling's doctrines were never systematically co-ordinated. He was subtle, ardent, and audacious; but he disregarded precision; and stood in striking contradiction to his predecessors, Kant and Fichte, in the absence of logical forms.

The effect of his teaching was felt more in the department of the philosophy of nature than elsewhere. Crowds of disciples,

some of them, as Oken and Steffens, illustrious disciples, attempted the application of his principles ; and after a vast quantity of ingenious but sterile generalization, it was found that these principles led to no satisfactory conclusion.

Schelling's ideas were, however, very generally accepted in the philosophical world at the time Hegel appeared. These ideas were thought to be genuine intuitions of the truth ; the only drawback was their want of systematic co-ordination. They were inspirations of the truth ; and demonstrations were needed. The position Hegel was to occupy became therefore very clear. Either he must destroy those ideas and bring forward others ; or he must accept them, and, in accepting, systematize them. This latter was no easy task, and this was the task he chose. In the course of his labors he deviated somewhat from Schelling, because the rigorous conclusions of his logic made such deviations necessary ; but these are, after all, nothing but modifications of Schelling's ideas ; very often nothing but different expressions for the same ideas.

What then constitutes Hegel's glory ? What is the nature of his contribution to philosophy, and what has placed him on so high a pedestal of renown ? It is nothing less than the invention of a new Method.*

The invention of a method has always been considered the greatest effort of philosophical genius, and the most deserving of the historian's attention. A method is a *path of transit*. Who-so discovers a path whereon mankind may travel in quest of truth, has done more towards the discovery of truth than thousands of men merely speculating. What had the observation and speculation of centuries done for astronomy before the right path was found ? And if a method could be found for philosophy—if a path of transit from the phenomenal to the noumenal world could be found—should we not then be quickly in possession of the truth ?

* This is the claim put up by his disciple, Michelet, *Gesch. der Systeme der Philos.* ii. 604-5 ; who declares Hegel's method to be all that can properly be called his own. Comp. Hegel's *Vermischte Schriften*, ii. 479.

A Method is all-important. The one invented by Descartes seemed promising; but it led to Malebranche and Spinoza. The one invented by Locke had obvious excellences; but it was a path of transit to Berkeley and Hume. That of Kant led to Fichte and Skepticism.

Curious to consider! In the modern as in the ancient world, the inevitable results of a philosophical Method are Idealism and Skepticism. One class of minds is led to Idealism or Mysticism; another class is led to Skepticism. But as both these conclusions are repugnant to the ordinary conclusions of mankind, they are rejected, and the Method which led to them is also rejected. A new one is found; hopes beat high; truth is about to be discovered; the search is active, and the result—always the same—repugnant Idealism or Skepticism. Thus struggling and baffled, hoping and dispirited, has Humanity forever renewed the conflict, without once gaining a victory. Sisyphus rolls up the heavy stone, which no sooner reaches a certain point than down it rolls to the bottom, and all the labor is to begin again.

We have already traced the efforts of many noble minds; we have seen the stone laboriously rolled upwards, and seen it swiftly roll down again. We have seen Methods discovered; we have followed adventurous spirits as they rushed forward to conquest; and seen the discouragement, the despair which possessed them, as they found their paths leading only to a yawning gulf of Skepticism, or a baseless cloud-land of Idealism. We have now to witness this spectacle once more. We have to see whither Hegel's Method can conduct us.

And what is this Method which Hegel discovered? Accepting as indisputable the identity of Object and Subject, he was forced also to accept the position, that whatever was true of the thought was true of the thing. In other words, Mind and Matter being identical, Ideas and Objects were correlates, and equally true. This was the position upon which Descartes stood; the position upon which Spinoza stood. Schelling and Hegel arrived at this position by a different route, but they also took their stand upon it.

Now, it is evident that such a position is exposed to attacks on all sides; to none more so than the contradictions which rise up from within it. If whatever is true of Ideas is true also of Objects, a thousand absurdities bristle up. Thus, as Kant said, there is considerable difference between *thinking* we possess a hundred dollars, and *possessing* them. Hegel's answer is delicious: he declares that "Philosophy does not concern itself with such things as a hundred dollars!" (*daran ist philosophisch nichts zu erkennen.*) Philosophy directs its thoughts only towards that which is necessary and eternal.

Very well: let such miserable illustrations as that of dollars be banished from discourse; let us concern ourselves only with what is necessary and eternal; let us confine ourselves to abstractions. Are there no contradictions here between Thoughts and Realities? For example, we have the Thought of Non-existence: does therefore this Non-existence which is our Thought also possess an objective being? *Is* there a Non-existence?

We have chosen this idle question, because Hegel himself has forced us to it. He boldly says, that the Non-existence—the Nothing—*exists*, because it is a Thought (*das Nichts ist; denn es ist ein Gedanke*). It is not, however, merely a Thought, but it is the same Thought as that of a pure Being (*Seyn*), viz. an entirely *unconditioned* Thought.

In this, coupled with his famous axiom, that "Being and Non-Being are the same" (*Seyn und Nichts ist dasselbe*), we have two of the curious results to which his Method led him. It was the Method of Descartes, founded upon Descartes' principle of the truth of *ideas* being equivalent to the truth of *things*; but inasmuch as this met with strong opposition from various sides, Hegel resolved to give it a deeper, firmer basis, a basis that went underneath these contradictions. The basis was his principle of the *identity of contraries*.

Two contraries are commonly supposed to exclude each other reciprocally: Existence excludes Non-Existence. This notion Hegel pronounces to be false. Every thing is contradictory in

itself: contradiction forms its essence: its identity consists in being the union of two contraries. Thus Being (*Seyn*) considered absolutely—considered as unconditioned—that is to say, as Being in the abstract, apart from any individual thing, is the same as Nothing. Existence is therefore identical with its negation. But to conclude that there is not Existence, would be false; for the abstract Nothing (*Nichts*) is at the same time the abstract Being. We must therefore unite these two contraries, and in so doing we arrive at a middle term—the realization* of the two in one, and this is *conditioned* Existence—it is the world.

Here is another example. In pure light—that is, light without color or shadow—we should be totally unable to see any thing. Absolute clearness is therefore identical with absolute obscurity—with its negation, in fact; but neither clearness nor obscurity are complete alone: by uniting them we have clearness mingled with obscurity; that is to say, we have Light properly so called.

Hegel thus seized the bull by the horns. Instead of allowing himself to be worsted by the arguments derived from the contradictions to which the identity of Existence and Knowledge was exposed, he at once met the difficulty by declaring that the identity of contraries was the very condition of all existence; without a contrary nothing could come into being. This was logical audacity which astounded his countrymen, and they have proclaimed this feat worthy of immortal glory. A new light seemed to be thrown upon the world: a new aspect was given to all existences. Being was at the same time Non-Being; Subject was at the same time Object; and Object was Subject: Force was at the same time Impotence; Light was also Darkness, and Darkness was also Light.

“Nothing in this world is single;
All things, by a law divine,
In one another's being mingle.”

The merit of this discovery, whatever may be its value, is

* The original word is *werden*—the *becoming*. It is much used in German speculation to express the transition from Non-being to Being.

considerably diminished when we remember how distinctly it was enunciated in ancient Greece. Heraclitus had told us how "All is, and is not; for though it comes into being, yet it forthwith ceases to be." Empedocles had told us how there was "Nothing but a mingling and then a separation of the mingled." Indeed the constant flux and reflux of life, the many changes, and the compound nature of all things, must early have led men to such a view. Hegel himself admits that all the positions maintained by Heraclitus have been by him developed in his Logic. What then was wanting to Heraclitus—what is the great merit of Hegel? A perception of the logical law of the identity of contraries. To this Hegel has the sole claim.

Here, then, is the foundation-stone of Hegel's system. He adopts the principle of the identity of Subject and Object. This principle being pronounced false, because it leads to manifest contradictions, Hegel replies that the principle is true; and that it *must* lead to contradictions, because the identity of contraries is the condition of all existence.

Such is the Method which admiring disciples extol as the greatest effort of Philosophy, as the crown of all previous speculations; and even in France it has been in some quarters accepted as a revelation.

The *law* being given, we may now give the *process*. Let us take any one Idea (and with Hegel an Idea is a reality, an Object, not simply a modification of the Subject); this Idea, by its inherent activity, tends to develop that which is within it. This development operates a division of the Idea into two parts—a positive and a negative. Instead of one Idea we have therefore two, which reciprocally exclude each other. The Idea, therefore, by the very act of development, only conduces to its own negation. But the *process* does not stop there. The negation itself must be negated. By this negation of its negation, the Idea returns to its primitive force. But it is no longer the same. It has developed all that it contained. It has absorbed its contrary.

Thus the negation of the negation, by *suppressing* the negation, at the same time *preserves* it.*

We may, by way of anticipation, observe that Hegel's notion of God becoming conscious of Himself in Philosophy, and thereby attaining His highest development, is founded on the above process. God as pure Being can only pass into reality through a negation; in Philosophy He *negatives this negation*, and thus becomes a *positive* affirmation.

§ III. ABSOLUTE IDEALISM.

We have seen Hegel's Method. Whether that be a path of transit to the domain of truth, or only to the cloud-land of mysticism and the bogs of absurdity, our readers will very soon decide. Meanwhile we must further detail Hegel's opinions; we must see whither his Method did lead him.

As every thing contains within itself a contradiction, and as the identity of the two constitutes its essence, so we may say that Schelling's conception of the identity of Subject and Object was not altogether exact. He assumed the reality of both of these *poles* of the magnet; and the identity he called the point of indifference between them. These two extremities were always separate, though identified. Hegel declared that the essence of all relation—that which is true and positive in every relation—is not the *two terms related*, but the *relation itself*. This is the basis of Absolute Idealism.

It may be thus illustrated. I see a tree. Psychologists tell me that there are three things implied in this one fact of vision, viz. a tree, an image of that tree, and a mind which apprehends that image. Fichte tells me that it is I alone who exist: the tree and the image of the tree are but one thing, and that is a modification of my mind. This is *Subjective Idealism*. Schelling tells me that both the tree and my Ego are existences

* This play upon words is assisted by the German *aufheben*, which means "to suppress" as well as "to preserve." See Ott, *Hegel et la Philos. Alle mande*, p. 80.

equally real or ideal, but they are nothing less than manifestations of the Absolute. This is *Objective Idealism*. But, according to Hegel, all these explanations are false. The only thing really existing (in this one fact of vision) is the Idea—the *relation*. The Ego and the Tree are but two terms of the relation, and owe their reality to it. This is *Absolute Idealism*.

Of the three forms of Idealism, this is surely the most preposterous; and that any sane man—not to speak of a man so eminent as Hegel—should for an instant believe in the correctness of the logic which “brought him to this pass”—that he should not at once reject the premises from which such conclusions followed—must ever remain a wonder to all sober thinkers—must ever remain a striking illustration of the unbounded confidence in bad logic which distinguishes metaphysicians—

“Gens ratione ferox, et mentem pasta chimæris.”

Truly, a race mad with logic, and feeding the mind with chimeras.

What does this Absolute Idealism bring us to? It brings us to a world of mere “relations.” The Spinozistic notion of “Substance” was too gross. To speak of Substance, was to speak only of *one* term of a relation. The Universe is but the Universe of Ideas, which are at once both Objective and Subjective, their essence consisting in the relation they bear to each other, in the identity of their contradiction.

Remark, also, that this Absolute Idealism is nothing but Hume’s Skepticism, in a dogmatical form. Hume denied the existence of Mind and Matter, and said there was nothing but Ideas. Hegel denies the existence of both Object and Subject, and says there is nothing but the “relations” of the two. He blames Kant for having spoken of Things as if they were only appearances to us (*Erscheinungen für uns*) while their real nature (*Ansich*) was inaccessible. The real relation, he says, is this: that the Things we know are not only appearances to us, but are in themselves mere appearances (*sondern an sich blosse Erscheinungen*). The real Objectivity is this; that our Thoughts

are not only Thoughts, but at the same time are the reality of Things.*

This is *the* Philosophy—not *a* Philosophy, remember—not a system which may take its place amongst other systems. No, it is the Philosophy *par excellence*. We have Hegel's word for it;† we have the confirmation of that word by many ardent disciples. True it is, that some of the young Hegelians, when reproached with the constant changes they introduce, reply that it belongs to the nature of Philosophy to change. But these are inconsiderate, rash young men. Mature and sober thinkers (of Hegel's school) declare that, although some improvements are possible in detail, yet on the whole Hegel has given *the* Philosophy to the world.

And this philosophy is not a system of doctrines whereby man is to guide himself. It is something far greater. It is the contemplation of the self-development of the Absolute. Hegel congratulates mankind upon the fact of a new epoch having dawned. "It appears," says he, "that the World-Spirit (*Weltgeist*) has at last succeeded in freeing himself from all encumbrances, and is able to *conceive himself as Absolute Intelligence* (*sich als absoluten Geist zu erfassen*). . . . For he is this only in as far as he knows himself to be the Absolute Intelligence: *and this he knows only in Science; and this knowledge alone constitutes his true existence.*"‡

Such pretensions would be laughable, were they not so painful to contemplate. To think not only of one man, and that one remarkable for the subtlety of his intellect, a subtlety which was its bane, together with many other men—some hundred or so, all rising above the ordinary level of ability—one and all cultivating, as the occupation of their lives, a science with such pretensions, and with such a Method as that of the identity of

* "Dass die Gedanken nicht bloss unsere Gedanken, sondern zugleich das Ansich der Dinge und des Gegenständlichen überhaupt sind."—*Encyclopädie*, p. 89; see also p. 97. The whole of this Introduction to the *Encyclopädie* is worth consulting.

† *Gesch. der Philos.* iii. 690.

‡ *Ibid.* iii. 689.

contraries! The delusions daily to be seen are those of ignorance, and only depend upon ignorance. But the delusions of Metaphysics are the delusions of an ambitious intelligence which "o'erleaps itself." Men such as Fichte, Schelling, and Hegel, for example, belong incontestably to a high order of intelligences; yet we have seen to what their reasonings brought them; we have seen what absurdities they could accept, believing they had found the truth. Hegel especially impresses you with a sense of his wonderful power. His works we have always found very suggestive; his ideas, if repugnant to what we regard as the truth, are yet so coherent, so systematically developed, so obviously coming from matured meditation, that we have always risen from the perusal with a sense of the author's greatness. We allude especially to his *Lectures on Æsthetics*, his *History of Philosophy*, his *Philosophy of History*, and his *Philosophy of Religion*.

As for the system itself, we may leave to all readers to decide whether it be worthy of any attention, except as an illustration of the devious errors of speculation. A system which begins with assuming that Being and Non-Being are the same, because Being in the abstract must be conceived as the Unconditioned, and so must Non-Being, therefore both, as unconditioned, are the same; a system which proceeds upon the identity of contraries as the method of Philosophy; a system in which Thought is the same as the Thing, and the Thing is the same as the Thought; a system in which the only real positive existence is that of simple Relation, the two terms of which are Mind and Matter;—this system, were it wholly true, leaves all the questions for which science is useful as a light, just as much in the dark as ever, and is therefore unworthy the attention of earnest men working for the benefit of mankind.

Not only is it useless; it is worse, it is pernicious. The facility with which men can throw all questions into the systematic obscurity of metaphysics, has long been the bane of German Literature and Thought. In England and France we have been

saved from perpetuating the frivolous discussions of the School men, mainly because we have retained their nomenclature and terminology, and are warned by these from off scholastic ground; but the Germans, having invented a new philosophical language, do not perceive that the new terms disguise old errors; they fail to recognize in *Irrlicht* the familiar face of *Ignis fatuus*.

§ IV. HEGEL'S LOGIC.

Philosophy being the contemplation of the self-development of the Absolute, or, as Hegel sometimes calls it, the representation of the Idea (*Darstellung der Idee*), it first must be settled in what directions this development takes place.

The process is this. Every thing must be first considered *per se* (*an sich*); next in its negation, or some *other* thing (*Anderseyn*). These are the two terms—the contraries; but they must be identified in some third, or they cannot exist: this third is the Relation of the two (the *Anundfürsichseyn*). This is the affirmation which is founded on the negation of a negation: it is therefore positive, real.

The Absolute, which is both Thought and Being, must be considered in this triple order, and philosophy falls into three parts:

I. LOGIC, the science of the *Idee** *an und für sich*.

II. NATURE-PHILOSOPHY, as the science of the *Idee* in its *Anderseyn*.

III. PHILOSOPHY OF INTELLIGENCE, as the *Idee* which has returned from its *Anderseyn* to itself.

Logic, in this system, has a very different meaning from that usually given to the word. It is, indeed, equally, with the common logic, an examination of the forms of Thought; but it is more:—it is an examination of Things, no less than of Thoughts. As Object and Subject are declared identical, and whatever is true of the Thought is equally true of the Thing, since the

* The *Idee* is but another term for the Absolute. We shall use it, rather than *Idea*, because the English word cannot be employed without creating unnecessary confusion.

Thought is the thing, Logic, of course, takes the place of the ancient Logic, and, at the same time, of Metaphysics. It is the generation of all abstract ideas. Consequently it contains the whole system of Science; and the other parts are but the application of this Logic.

Hegel's *Logic* is contained in three stout volumes of dry hard scholasticism. It is a representation of the *Idee*, in its process of pure thought, free from all contact with objects. It is wholly abstract. It begins with pure Being. This pure Being, in virtue of its purity, is *unconditioned*; but that which has no conditions has no existence: it is a pure abstraction. Now a pure abstraction is also the *Nothing* (*das Nichts*): it also has no conditions; its unconditionalness makes its nothingness. The first proposition in Logic is, therefore, "Being and Non-Being are the same."

Hegel admits the proposition to be somewhat paradoxical, and is fully aware of its openness to ridicule; but he is not a man to be scared by a paradox, to be shaken by a sarcasm. He is aware that stupid common-sense will ask, "whether it is the same if my house, my property, the air I breathe, this town, sun, the law, mind, or God, exist or not." Certainly, a very pertinent question: how does he answer it? "In such examples," he says, "particular ends—utility, for instance—are understood, and then it is asked if it is indifferent to me whether these useful things exist or not? But, in truth, Philosophy is precisely the doctrine which is to free man from innumerable finite aims and ends, and to make him so indifferent to them that it is really all the same whether such things exist or not." Here we trace the Alexandrian influence; except that Plotinus would never have had the audacity to say that Philosophy was to make us indifferent whether God existed or not; and it must have been a slip of the pen which made Hegel include God in the examples: a slip of the pen, or else the "rigor of his pitiless logic," of which his disciples talk. "Pitiless" indeed!—more intrepid absurdity it would be difficult to find.

Remark, also, the evasive nature of his reply. Common-sense suggests to him a plain direct question, not without interest. This question, plain as it is, goes to the bottom of his system. He evades it by answering, that Philosophy has nothing to do with the interests of men. Very true; his system *has* nothing to do with them. But the question put was not, "Has Philosophy to concern itself with the interests of mankind?" The question put was, "If, as you say, Being and Non-Being are the same, is it the same thing to have a house and not to have it?" Hegel might have given a better answer even upon his own principles.

To return, however. The first proposition has given us the two contraries; there must be an identity—a relation—to give them positive reality. As pure Being, and as pure Non-Being, they have no reality; they are mere potentialities. Unite them, and you have the *Becoming* (*Werden*), and that is reality. Analyze this idea of Becoming, and you will find that it contains precisely these two elements,—a Non-Being from which it is evolving, and a Being which is evolved.

Now these two elements, which reciprocally contradict each other, which incessantly tend to absorb each other, are only maintained in their reality by means of the relation in which they are to each other;—that is, the point of the magnet which keeps the poles asunder, and by keeping them asunder prevents their annihilating each other. The Becoming is the first concrete Thought we can have, the first conception; Being and Non-Being are pure abstractions.

A question naturally suggests itself as to how Being and Non-Being pass from Abstractions into Realities. The only answer Hegel gives us is, that they *become* Realities: but this is answering us with the very question itself. We want to know *how* they become. In themselves, as pure Abstractions, they have no reality; and although two negatives make an affirmative in language, it is not so evident how they can accomplish this in fact. The question is of course insoluble; and those Hegelians whom we questioned on the point, unanimously declared it to be one of

those truths (very numerous in their system) which can be comprehended, but not proved.

Let us grant the Becoming. It is the identity of Being and Non-Being; and as such it is Being as *determined*, conditioned. All determination (*Bestimmung*) is Negation.* Therefore, in order that Being should become, it must suffer first a negation; the *Ansichseyn* must also be *Anderseyn*, and the relation of the two is total reality, the *Anundfürsichseyn*.

Quality is the first negation: it is the reality of a thing. That which constitutes Quality is the negation which is the condition of its Being. Blue, for example, is blue only because it is the negation of red, green, purple, etc.; a meadow is a meadow only because it is not a vineyard, a park, a ploughed field, etc.

Being, having suffered a Negation, is determined as Quality,—it is Something, and no longer an Abstraction. But this something is limited by its very condition; and this limit, this negation, is external to it: hence Something implies Some-other-thing. There is a *This* and a *That*. Now the Something and the Some-other-thing, the *This* and the *That*, are the *same* thing. *This* is a tree; *That* is a house. If I go to the house, it will then be the *This*, and the tree will be *That*. Let the tree be the Something, and the house the Some-other-thing, and the same change of terms may take place. This proves that the two are identical. The something carries its opposite (other-thing) within itself; it is constantly becoming the other-thing. Clearly showing that the only positive reality is the *Relation* which always subsists throughout the changes of the terms.

This, it must be owned, looks like the insanity of Logic. It is not, however, unexampled in Hegel's works. In his *Phänomenologie des Geistes*, he tells us that perception gives us the ideas of Now, Here, This, etc. And what is the Now? At noon I say "*Now* it is day." Twelve hours afterwards I say, "*Now* it is night." My first affirmation is therefore false as to the second,

* This, as many other ideas, is borrowed from Spinoza, in whose system it has real significance. In Hegel's it is a mere play upon words.

my second false as to the first : which proves that the *Now* is a general idea ; and as such a real existence, independent of all particular *Nows*.

Our readers are by this time probably quite weary of this frivolous Logic ; we shall spare them any further details. If they wish further to learn about Quantities, Identities, Diversities, etc., they must consult the original.

Those who are utter strangers to German speculation will wonder, perhaps, how it is possible for such verbal quibbles to be accepted as Philosophy. But, in the first place, Philosophy itself, in all its highest speculations, is but a more or less ingenious playing upon words. From Thales to Hegel, verbal distinctions have always formed the ground of Philosophy, and must ever do so as long as we are unable to penetrate the essence of things. In the second place, Hegel's *Logic* is a work requiring prodigious effort of thought to understand : so difficult and ambiguous is the language, and so obscure the meaning. Now, when a man has once made this effort, and succeeded, he is very apt to overvalue the result of all that labor, and to believe what he has found, to be a genuine truth. Thirdly, Hegel is very consistent ; consistent in audacity, in absurdity. If the student yields assent to the premises, he is sure to be dragged irresistibly to the conclusions. Fourthly, the reader must not suppose that the absurdities of Hegel's system are so apparent in his works as in our exposition. We have exerted ourselves to the utmost to preserve the real significance of his speculations ; but we have also endeavored to bring them into the clear light of day. Any thing except a *verbal* translation would reveal some aspects of the absurdity, by the very fact of bringing it out of the obscurity with which the German terminology veils it. The mountain looming through a fog turns out to be a miserable hut as soon as the fog is scattered ; and so the boasted system of Absolute Idealism turns out to be only a play upon words, as soon as it is dragged from out the misty terminology in which it is enshrouded.

§ V. APPLICATION OF THE METHOD TO NATURE AND HISTORY,
RELIGION AND PHILOSOPHY.

Having exhibited the various evolutions of the *Idee* as pure Thought, Hegel undertakes to exhibit its objective evolutions in the domain of Nature.

In the former attempt he had only to deal with abstractions ; and it was no such difficult matter to exhibit the "genesis of ideas"—the dependence of one formula upon another. Verbal distinctions were sufficient there. But verbal distinctions, audacious logic, and obscure terminology avail nothing in attacking the problems presented to us by Nature ; and in endeavoring to give scientific solutions, Nature is not to be coerced. Aware of the difficulties—seeing instinctively that the varieties of Nature could not be reduced to the same simplicity as the varieties of the *Idee*—as Thought had been reduced in his *Logic*—Hegel asserted that the determinations of the *Idee* in its *exteriority* could not follow the same march as the determinations of the *Idee* as Thought. Instead of generating each other reciprocally, as in the *Logic*, these determinations in Nature have no other connection than that of coexistence ; sometimes indeed they appear isolated.

When we look abroad upon Nature, we observe an endless variety of transformations. At first these seem without order ; on looking deeper, we find that there is a regular series of development from the lowest to the highest. These transformations are the struggles of the *Idee* to manifest itself *objectively*. Nature is a dumb Intelligence striving to articulate. At first she mumbles ; with succeeding efforts she articulates ; at last she speaks.

Every modification which the *Idee* undergoes in the sphere of pure Thought it endeavors to express in the sphere of Nature. And thus an object is elevated in the scale of creation in so far as it resumes within itself a greater number of qualities : inorganic matter is succeeded by organic, and amongst organized

beings there is a graduated scale from the plant up to man. In man the *Idee* assumes its highest grade. In Reason it becomes conscious of itself, and thereby attains real and positive existence—the highest point of development. Nature is divine in principle (*an sich*), but it is a mistake to suppose it divine *as it exists*. By the Pantheists Nature is made one with God, and God one with Nature. In truth, Nature is but the exteriority (*Aeusserlichkeit*) of God: it is the passage of the *Idee* through imperfection (*Abfall der Idee*). Observe moreover that Nature is not only external in relation to the *Idee*, and to the subjective existence of the *Idee*, namely Intelligence; but exteriority constitutes the condition in virtue of which Nature is Nature (*sondern die Aeusserlichkeit macht die Bestimmung aus, in welcher sie als Natur ist*).

The Philosophy of Nature is divided into three sections—Mechanics, Physics, and Physiology. Into the details, we are happy to say, our plan forbids us to enter; or we should have many striking illustrations of the futility of that Method which pretends to construct the scheme of the world *à priori*. Experimental philosophers—Newton especially—are treated with consistent contempt. Hegel is not a timid speculator; he recoils from no consequence; he bows down to no name; he is impressed by no fact, however great. That Newton's speculations should be no better than drivel, and his "discoveries" no better than illusions, were natural consequences of Hegel's fundamental theories. That all Europe had been steadily persevering in applying Newton's principles, and extending his discoveries,—that Science was making gigantic strides, hourly improving man's mastery over Nature, hourly improving the condition of mankind,—this fact, however great it might appear to others, when coupled with the other fact, that upon the ontological Method no discoveries had yet been made, and none seemed likely to be made—appeared to Hegel as unworthy of a philosopher's notice. The interests of mankind were vulgar considerations, for which

there would always be abundant vulgar minds. The philosopher had other objects.

The third and last part of Hegel's system is the Philosophy of Intelligence. Therein the *Idee* returns from Nature to itself, and returns through a consciousness of itself.

Subjectively the *Idee* first manifests itself as a Soul; it then returns upon itself, and becomes Consciousness; and finally renders itself an Object to itself, and then it is Reason.

Objectively the *Idee* manifests itself as Will, and realizes itself in History and in Law.

The Subjective and Objective manifestations being thus marked out, we have now to see in what manner the identity of the two will manifest itself. The identity of the Objective and Subjective is the *Idee* as Intelligence, having consciousness of itself in individuals, and realizing itself as Art, as Religion, and as Philosophy.

The "Lectures on the Philosophy of History,"* edited by the late accomplished Professor Gans, is one of the pleasantest books on the subject we ever read. The following ideas will be sufficient to give an indication of its method.

History is the development of the *Idee* objectively—the process by which it attains to a consciousness of itself by explaining itself.† The condition of Intelligence is to know itself; but it can know itself only after having passed through the three phases of the method, namely, affirmation, negation, and negation of negation, as the return to consciousness endowed with reality. It is owing to these phases that the human race is perfectible.

States, Nations, and Individuals represent the determinate moments of this development. Each of these moments manifests

* *Werke*, vol. ix.

† History is a sort of Theodicea; the merit of originality, however, which Hegel claims (*Einleitung*, p. 20), is due to Vico, from whom he has largely borrowed; Vico expressly calls his New Science a *Civil Theology of Divine Providence*. See *La Science Nouvelle*, livre i. ch. iv.

itself in the constitution, in the manners, in the creeds, in the whole social state of any one nation. For this nation it is what we call the spirit of the age: it is the only possible truth, and by its light all things are seen. But with reference to the absolute *Idee* all these particular manifestations are nothing but *moments* of transition—instruments by which the transition to another higher moment is prepared. Great men are the incarnations of the spirit of the age.

It is not every nation that constitutes itself into a state: to do that, it must pass from a family to a horde, from a horde to a tribe, and from a tribe to a state. This is the formal realization of the *Idee*.

But the *Idee* must have a theatre on which to develop itself. The Earth is that theatre; and as it is the product of the *Idee* (according to the *Naturphilosophie*), we have the curious phenomenon of an actor playing upon a stage—that stage being himself! But the Earth, as the geographical basis of History, has three great divisions:—1. The mountainous regions. 2. The plains and valleys. 3. The coasts and mouths of rivers. The first represents the primitive condition of mankind; the second the more advanced condition, when society begins to be formed; the third, when, by means of river-communication, the activity of the human race is allowed free development in all directions, particularly of commerce. This is another of the ideas of Vico,* and is in contradiction to all history.

The great *moments* of History are four. 1. In the *East* we have the predominance of substantiality; the *Idee* does not know its freedom. The rights of men are unknown because the East knows only that *one* is free. This is the *childhood* of the World. 2. In Greece we have the predominance of Individuality. The *Idee* knows that it is free, but only under certain forms, that is to say, only *some* are free. Mind is still mixed with Matter, and finds its expression therein; this expression is

* *La Science Nouvelle*, livre i. ch. ii. § 97.

Beauty. This is the *youthhood* of the World. 3. In Rome we have opposition between the Objective and Subjective: the political universality and individual freedom both developed, yet not united. This is the *Manhood* of the World. 4. In the Teutonic Nations we have the unity of the contradiction—the *Idee* knowing itself; and instead of supposing, like Greece and Rome, that *some* only are free, it knows that *all* men are free. This is the *old-age* of the World; but although the old-age of body is weakness, the old-age of Mind is ripeness. The first form of government which we see in History is Despotism; the second is Democracy and Aristocracy; the third is Monarchy.*

On reading over this meagre analysis, the ingenious speculations of the original will scarcely be recognized. Such is the art with which Hegel clothes his ideas in the garb of Philosophy, that though aware that he is writing fiction, not history, and giving us perversions of notorious facts as the laws of historical development—telling us that the Spirit of the World manifests himself under such and such phases, when it is apparent to all that, granting the theory of this World-Spirit's development, the phases were *not* such as Hegel declares them to have been;—although we are aware of all this, yet is the book so ingenious and amusing, that it seems almost unfair to reduce it to such a *caput mortuum* as our analysis. Nevertheless the principles of his philosophy of History are those we have given above. The application of those principles to the explication of the various events of History, is still more ingenious.

Hegel's *Philosophy of Religion* has in the last few years been the subject of bitter disputes. The schisms of the young Hegelians—the doctrines of Strauss, Feuerbach, Bruno, Bauer, and others—being all deduced, or pretended to be deduced, from Hegel's system, much angry discussion has taken place as to the real significance of that system. When doctors thus disagree, we shall not presume to decide. We will leave the matter to

* *Philosophie der Geschichte*, p. 123.

theologians; and for the present only notice Hegel's fundamental ideas.

It is often a matter of wonder to see how Hegel's Method is applied to all subjects, and how his theory of life can be brought to explain every product of life. This is doubtless a great logical merit; and it inspires disciples with boundless confidence. Few, however, we suspect, have approached the subject of Religion without some misgivings as to the applicability of the Method to explain it. Probably the triumph is great when the applicability is shown to be as perfect here as elsewhere. Of this our readers shall judge.

Hegel, of course, accepts the Trinity; his whole system is Trinitarian. God the Father is the eternal *Idee an und für sich*: that is to say, the *Idee* as an *unconditioned* Abstraction. God the Son, *engendered* by the Father, is the *Idee* as *Andersseyn*: that is to say, as a *conditioned* Reality. The *separation* has taken place which, by means of a *negation*, gives the Abstraction real existence. God the Holy Ghost is the Identity of the two; the *negation of the negation* and perfect totality of existence. He is the Consciousness of himself as Spirit: this is the condition of his existence.

God the Father was before the World, and created it. That is to say, he existed *an sich*, as the pure *Idee*, before he assumed any reality. He created the World, because it is the essence of his being to create (*es gehört zu seinem Seyn, Wesen, Schöpfer zu seyn*). Did he not create, then would his own existence be incomplete.

The vulgar notion of theologians is that God created the world by an act; but Hegel says that the creation is not an act, but an eternal moment—not a thing *done*, but a thing perpetually *doing*; God did not *create* the world, he is eternally *creating* it. Attached also to this vulgar notion, is another less precisely but more commonly entertained; namely, that God, having created the world by an act of his will, lets it develop itself with no interference of his; as Goethe somewhere ridicules it, he "sits aloft

seeing the world go." This was not the doctrine of St. Paul, whose pregnant words are, "*In Him* we live, and move, and have our being." We live *in* God, not out of him, not simply by him. And this is what Hegel means when he denies that the creation was a single act. Creation was, and is, and ever will be. Creation is the reality of God: it is God passing into activity, but neither suspended nor exhausted in the act.

This is all we can here give of his *Philosophy of Religion*; were we to venture further, we should only get ourselves entangled in the thorny labyrinth of theological problems. Let us pass, therefore, to his *History of Philosophy*, which, according to him, is the history of the development of the *Idee* as intelligence. This development of thought is nothing more than the various transitions which constitute the *moments* of the absolute Method. All these *moments* are represented in history; so that the *History of Philosophy* is the reproduction of the *Logic* under the forms of intelligence. The succession of these moments gives to each period a particular philosophy; but these various philosophies are, in truth, only parts of the one philosophy. This looks like the Eclecticism of Victor Cousin; and indeed Cousin's system is but an awkward imitation of Hegel: but the Frenchman has either misunderstood, or has modified, the views of his master.

Historically speaking, there have been, according to Hegel, but two philosophies—that of Greece and that of Germany. The Greeks conceived Thought under the form of the *Idee*; the moderns have conceived it under the form of *Spirit*. The Greeks of Alexandria arrived at unity; but their unity was only ideal, it existed objectively in thought. The subjective aspect was wanting: the totality knew itself not as subjective and objective. This is the triumph of modern philosophy.

The *moments* have been briefly these:—1. With Thales and the Eleatics, the *Idee* was conceived as pure Being—the One. 2. With Plato it was conceived as Universal, Essence, Thought. 3. With Aristotle as Conception (*Begriff*). 4. With the Stoics,

Epicureans, and Sceptics, as subjective Conception. 5. With the Alexandrians as the totality of Thought. 6. With Descartes as the Self-Consciousness. 7. With Fichte as the Absolute, or *Ego*. 8. With Schelling as the Identity of Subject and Object.

We close here our exposition of Hegel's tenets; an exposition which we have been forced to give more in his own words than we could have wished; but the plan we adopted with respect to Kant and Fichte would not have been so easy (we doubt if it be possible) with respect to Hegel, whose language *must* be learned, for the majority of his distinctions are only verbal. In Kant and Fichte the thoughts were to be grappled with; in Hegel the form is every thing.

We have only touched upon essential points. Those desirous of more intimate acquaintance with the system, are referred to the admirable edition of his complete works, published by his disciples, in twelve volumes, octavo. If this voluminousness be somewhat too alarming, we can recommend the abridgment by Franz and Hillert (*Hegel's Philosophie in wörtlichen Auszügen*, Berlin, 1843), where the whole system is given in Hegel's own words, and only his illustrations and minute details are omitted. Michelet's work is useful mainly for its bibliography. He indicates the various directions taken by Hegel's disciples. Chalybäus is popular, but touches only on a few points. Barchou de Penhoen evidently knows Hegel only at second-hand, and is not to be trusted. Dr. Ott's work is ill written, but is very useful as an introduction to the study of the works themselves, and has been very useful to us in our exposition. No work of Hegel's has been translated into English;* and only his *Æsthetik* into French, and that is more an analysis, we believe, than a translation. The *Philosophy of History* has been translated into Italian.

* Since this was written, a part of the *Logic* has appeared under this title: *The Subjective Logic of Hegel*, translated by H. Sloman and J. Wallon, 1855. To the list of works mentioned above should be added Wilm's admirable *Hist. de la Philos. Allemande*, by far the best work on the subject known to me.

TENTH EPOCH.

PSYCHOLOGY SEEKING ITS BASIS IN PHYSIOLOGY.

CHAPTER I.

CABANIS.

WHILE Ontology was reasserting its claim in Germany, with such results as we have seen, Philosophy in England and France relinquished its lofty claims, and contented itself with the endeavor to construct a Psychology. The writings of Reid, Stewart, Brown, James Mill, and their disciples, valuable in many respects, are all deficient in Method, all without a firm basis. The attempt of Hartley and Darwin to connect Psychology with Physiology, we have seen was premature. It nevertheless pointed out the true direction. If Psychology is to be studied as a Science, it must be studied according to rigorously scientific principles; if, on the contrary, it is to be studied as a branch of Metaphysics, then indeed the Scotch school, and every other unscientific school, may justly complain of the encroachment of Physiology on their domain.

The history of the rise of psychological Method remains to be written. It began with Hobbes and Locke. They opposed the reigning doctrine of innate ideas. They analyzed Thought as the product of Experience. Hobbes, as was natural in the first vehemence of the swing of reaction against spiritualism, recognizes nothing in the mind but sensations in all their varieties;

the mind, he said, is moved by external motion, that is all. Locke, on deeper meditation, saw that there was something more than this; he saw, dimly it is true, yet never overlooking it altogether, that the mind *co-operated*. Not only Sense, but Reflection on the materials given through Sense, furnished, he said, the complex thoughts of man. Thus he proclaimed Experience the source of knowledge. The mind of the child was like a sheet of blank paper, on which Experience wrote its various records. In Locke, we see the initial steps of the Physiological Method; and as he was himself an anatomist, there is nothing surprising in his having been led by his study of man's structure to some conclusions respecting man's mind. He directed that attention to Sense which metaphysicians had been in the habit of directing to ideas and verbal subtleties; and by so doing, took an important step towards the confrontation of speculation with *fact*; and initiated the still more important idea of a *constant relation between organ and function*. He also was led to study the *growth* of mind; and hence his frequent reference to savages and children, which distresses Victor Cousin, who is often as terrified at a fact as at a ghost.

Great as Locke's services were, there was a radical vice in his system which prevented its acceptance. He began the Physiological Method, but he only began it. The Experience-hypothesis would *not* suffice to explain all phenomena (at least not as that hypothesis was then understood); there were forms of thought neither reducible to Sense and Reflection, nor to individual Experience. He drew illustrations from children and savages; but he neither did this systematically, *nor did he extend the Comparative Method to animals*. The prejudices of that age forbade it. The ignorance of that age made it impossible. Comparative Physiology is no older than Goethe, and Comparative Psychology is only now glimmering in the minds of men as a possibility. If men formerly thought they could understand man's body by dissecting it, and did not need the light thrown thereon by the dissection of animals; they were still less likely

to seek psychical illustrations in animals, denying, as they did, that animals had minds.

The school of Locke, therefore, although regarding Mind as a property of Matter, consequently directing attention to the human organism, trying to understand the mechanism of sensation, and thus dealing with tangible realities instead of with impalpable and ever-shifting entities, was really incompetent to solve the problems it had set itself, because its Method was imperfect, and its knowledge incomplete. The good effect of its labors was positive; the evil, negative. Following out this positive tendency, we see Hartley and Darwin advancing still nearer to a true Method;—by a bold hypothesis, making the phenomena dependent on vibrations in the nerves; thus leading to a still more precise and *definite* consideration of the organism.

These were, however, tentatives guided by no distinct conception of the necessary relation between organ and function; and the Physiological Method, truly so called, must be first sought in Cabanis.

Pierre Jean Georges Cabanis was born 5th of June, 1757, at Conac, near Brives. He became a physician, and established himself at Auteuil, where, in the house of Madame Helvetius, he cultivated the acquaintance of Turgot, D'Holbach, Franklin, Condillac, Diderot, and D'Alembert. To these let us add Condorcet and Mirabeau, both of whom he attended in their last hours. He died on the 6th of May, 1808. He wrote several works, but one only has survived in the memories of philosophic readers: *Rapports du Physique et du Moral de l'Homme*.*

A disciple of Condillac, he nevertheless saw, more distinctly than any man before him, one radical vice of Condillac's system, namely, the limitation of mental phenomena to sensations, and

* This work originally appeared as a series of *Mémoires* read before the Institute (1798-99). It was published as a separate book in 1802, under the title *Traité du Physique et du Moral de l'Homme*; which title is also borne by the second edition of 1805. Not until 1815, and after the death of Cabanis, was the word *Rapports* substituted for *Traité*.

the non-recognition of connate instincts. If sensation were the admitted source of all mental phenomena (and Cabanis rightly extended these phenomena beyond "ideas"), it became the duty of philosophers to examine the nature of sensation itself. "No one," he says, "had clearly explained in what the act of sensibility consists. Does it always presuppose consciousness and distinct perception? and must we refer to some other property of the living body all those unperceived impressions and movements in which volition has no part?" To put this question was to inaugurate a new study. It became necessary to examine whether all mental phenomena were not reducible to the fundamental laws of sensibility. "All the while that the Intellect is judging and the Will is desiring or rejecting, many other functions are going on, all more or less necessary to the preservation of life. Have these diverse operations any influence, the one on the other? And is it possible from the consideration of different physical and moral states, which are observed simultaneously, to seize the relations which connect the most striking phenomena, with such precision as to be certain that in the other less obvious cases, if the connection is less easily detected, it is so simply because the indications are too fugitive?"

This conception of a possible Psychology is in itself enough to mark forever the place of Cabanis in the History of Philosophy. It establishes Psychology as one branch of the great science of Life. It connects the operations of intelligence and volition with the origin of all vital movements. It makes Life and Mind correlatives. This was a revival of the great truth clearly recognized by Aristotle, from whom it descended to the Schoolmen. "*Impossibile est,*" says Aquinas, very emphatically, "*in uno homine esse plures animas per essentiam differentes, sed una tantum est anima intellectiva, quæ vegetativæ et sensitivæ et intellectivæ officiis fungitur.*" The division of Life and Mind as two distinct entities was introduced by the Italians of the Renaissance, adopted by Bacon, and once more rejected by Stahl, who returned to the Aristotelian conception. With the fall of Stahl's

doctrine, the separation of Mind from Life again became the dictum of the schools, until Cabanis; no one since Cabanis seems to have been thoroughly impressed with the unity of the two till Mr. Herbert Spencer presented it as the basis of psychological induction.* The consequences were immediate: if Mind was to be studied as one aspect of Life, it could only be efficiently studied on that inductive and experimental Method which had reached the certain truths of positive science: "Les principes fondamentaux seraient également solides; elles se formeraient également par l'étude sévère et par la composition des faits; elles s'étendraient par les mêmes méthodes de raisonnement." Cabanis warns his readers that they will find nothing of what is called Metaphysics in his book; they will only find physiological researches, *mais dirigées vers l'étude particulière d'un ordre de fonctions*.

In the purely physiological direction, indeed, Cabanis had many predecessors, from Willis in the middle of the seventeenth century, to Prochaska, who preceded Cabanis by one year only.† The nervous system had of course been studied by physiologists, and this study led them to psychological theories; but although we may find elsewhere, especially in Unzer and Prochaska, sounder views of the physiology of the nervous system, we find nowhere so clear and large a conception of the physiological psychology.

"Subject to the action of external bodies," says Cabanis, "man finds in the impressions these bodies make on his organs at once his knowledge and the causes of his continued existence; for to live is to feel; and in that admirable chain of phenomena which constitute his existence, every *want* depends on the development

* Spencer, *Principles of Psychology*, 1855.

† *Lehrsätze aus der Physiologie des Menschen*, 1797. Curiously enough the second and third editions of this work were exactly contemporaneous with the second and third editions of Cabanis, 1802 and 1805 (counting the publication in the *Mémoires de l'Institut* as one edition). It is not to be supposed that Cabanis knew of Prochaska's existence; nor is there more than a general resemblance in their physiological conclusions.

of some *faculty* ; every faculty by its very development satisfies some want, and the faculties grow by exercise as the wants extend with the facility of satisfying them. By the continual action of external bodies on the senses of man, results the most remarkable part of his existence. But is it true that the nervous centres only receive and combine the impressions which reach them from these bodies ? Is it true that no image or idea is formed in the brain, and that no determination of the sensitive organ takes place, other than by virtue of these same impressions on the *senses* strictly so called ?”*

This question cuts away the very root of Condillac’s system. Cabanis had no difficulty in showing that Condillac’s limitation of our mental phenomena to the action of the special senses, was a contradiction of familiar experience, *e. g.* the manifold influence exercised by the age, sex, temperament, and the visceral sensations generally. A survey of the human organism, compared with that of animals, conducted him to the following conclusions :

“The faculty of feeling and of spontaneous movement, forms the character of animal nature.

“The faculty of feeling consists in the property possessed by the nervous system of being warned by the impressions produced on its different parts, and notably on its extremities. These impressions are internal or external.

“External impressions, when perception is distinct, are called *sensations*.

“Internal impressions are very often vague and confused, and the animal is then only warned by their effects, and does not clearly distinguish their connection with the causes.

“The former result from the application of external objects to the organs of sense ; and on them *ideas* depend.

“The latter result from the development of the regular functions, or from the maladies to which each organ is subject ; and from these issue those determinations which bear the name of *instincts*.

* *Deuxième Mémoire*, § ii.

"Feeling and movement are linked together. Every movement is determined by an impression, and the nerves, as the organs of feeling, animate and direct the motor organs.

"In feeling, the nervous organ reacts on itself. In movement it reacts on other parts, to which it communicates the contractile faculty, the simple and fecund principle of all animal movement.

"Finally, the vital functions can exercise themselves by the influence of some nervous ramifications, isolated from the system: the instinctive faculties can develop themselves, even when the brain is almost wholly destroyed, and when it seems wholly inactive.

"But for the formation of thoughts it is necessary that the brain should exist, and be in a healthy condition: it is the special organ of thought."*

He justly repudiates any attempt to explain *sensibility*, which must be accepted as a general property of organized beings, in the same way that attraction is accepted as a general property of masses. No general fact admits of explanation. It can only be subordinated to some other fact, and be explained by it, on the supposition that it is *not* general. Accepting sensibility, therefore, as an ultimate fact in the organic world, he detects its phenomena running through all those called vital and all those called mental.

"It is something," he says, "to have established that all ideas and all moral phenomena are the results of impressions received by the different organs; and I think a still wider step is taken when we have shown that these impressions have appreciable differences, and that we can distinguish them by their seat and the character of their products, although they all act and react on each other, on account of the rapid and continual communications with the sensitive organ."† The object of his treatise is to examine the relations existing between the moral and physical conditions, how the sensations are modified by modifications in

* *Deuxième Mémoire*, § viii.

† *Ibid.*, § v.

the organs, how ideas, instincts, passions are developed and modified by the influences of age, sex, temperament, maladies, etc. It is not, therefore, a treatise on Psychology, but contributions towards a science of Psychology, and as such may still be read with advantage, although the science of the present day rejects many of its physiological details. He foresaw that this would be so. "*Le lecteur s'apercevra bientôt que nous entrons ici dans une carrière toute nouvelle. Je n'ai pas la prétention de l'avoir parcouru jusqu'au bout; mais des hommes plus habiles et plus heureux achèveront ce que trop souvent je n'ai pu que tenter.*"

As a specimen of inductive Psychology, we must not pass over in silence his experimental proof of instinct being developed by certain organic conditions. He takes one of the most marvellous of instincts, that of maternal love, and having analyzed its physiological conditions, he says "In my province, and some of the neighboring provinces, when there is a deficiency of sitting Hens, a singular practice is customary. We take a capon, pluck off the feathers from the abdomen, rub it with nettles and vinegar, and in this state of local irritation place the capon on the eggs. At first he remains there to soothe the pain; soon there is established within him a series of unaccustomed but agreeable impressions, which attach him to these eggs during the whole period of incubation; and the effect is to produce in him a sort of factitious maternal love, which endures, like that of the hen, as long as the chickens have need of aid and protection. The cock is not thus to be modified; he has an instinct which carries him elsewhere."

The novelty of the conception which Cabanis put forth, and the interest attached to many of his illustrations, made his work very popular; but its influence was only indirect. The ignorance which almost all psychologists continued to display, not only of Physiology, but of the necessity of a physiological Method, together with the alarm excited by the accusation of "materialism," aided as it was by the reaction, mainly political, but soon extending itself to philosophical questions, which con-

demned the labors of the eighteenth century, left Cabanis with few adherents and no continuers. In elaborate works the brain was still designated as the "organ of the mind," but the mind was passionately declared *not* to be the function of the brain; the profounder views of Cabanis, which regarded Mind as one aspect of Life, were replaced by the old metaphysical conceptions of *le Moi*—the Ego—the immaterial Entity *playing upon* the brain as a musician plays upon an instrument.* Instinct was no longer regarded as determined by the organism, changing with its changes, rendered abortive by mutilations, and rendered active by stimulation; but as a "mysterious principle implanted" in the organism: a "something" which, although essentially mysterious and unknowable, appeared to be perfectly well known to the metaphysicians.

While the reaction was strong against Cabanis and against the whole eighteenth-century Philosophy, there arose another doctrine, which, taking Physiology as its avowed basis, succeeded, in spite of vehement opposition, in establishing itself permanently among the intellectual tendencies of the age; and that doctrine may now be said to be the only psychological one which counts any considerable mass of adherents. I allude to Phrenology.

* One living writer, of authority, has gravely declared that mental fatigue is the consciousness which the *mind* has of the *brain's* weariness! In our confessed inability to understand what matter *is*, why will men persist in dogmatizing on what it *is not*? We know neither matter nor spirit, we only know phenomena.

CHAPTER II.

PHRENOLOGY.

§ I. LIFE OF GALL.

FRANCIS JOSEPH GALL was born at Tiefenbrunn, in Suabia, on the 9th of March, 1757. In the preface to his great work, *Anatomie et Physiologie du Système Nerveux*, 1810, he narrates how as a boy he was struck with the differences of character and talents displayed by members of the same family, and how he observed certain external peculiarities of the head to correspond with these differences. Finding no clue given in the works of metaphysicians, he resumed his observations of nature. The physician of a lunatic asylum at Vienna allowed him frequent occasions of noticing the coincidence of peculiar monomaniacs with peculiar configurations of the skull. The prisons and courts of justice furnished him with abundant material. Whenever he heard of a man remarkable either for good or evil, he made his head a study. He extended his observation to animals; and finally sought confirmation in anatomy. The exterior of the skull he found, as a general rule, to correspond with the form of the brain.

After twenty years of observation, dissection, theorizing, and arguing, he delivered his first course of lectures in Vienna. This was in 1796. The novelty of his views excited a great sensation; one party fanatically opposing them, another almost as fanatically espousing them. Ridicule was not sparing. The new system lent itself to ridicule, and angry opponents were anxious, as opponents usually are, to show that what made them angry was utterly farcical. In 1800 Gall gained his best disciple, Spurzheim.

Hitherto Gall had been aided by a young anatomist named Niklas, to whom he taught the new method of dissecting the brain;* now Spurzheim's mastery of anatomical manipulation, combined with his power of generalization and of popular exposition, came as welcome aids in the gigantic task of establishing the new doctrine on a scientific basis.

In 1802, M. Charles Villers, the translator of Kant, published his *Lettre à Georges Cuvier sur une Nouvelle Théorie du Cerveau par le Docteur Gall*. I have not been able to procure this Letter, but it is in many points interesting to the historian of Phrenology, because it not only expounds the doctrine as it was *then* conceived, but describes the localization of the organs then fixed on by Gall. A plate represents the skull, marked by Gall himself, with the four-and-twenty organs, which at that period comprised the "original faculties" of the mind. Among these twenty-four, there are four subsequently discarded altogether: Vital Force—Susceptibility—Penetration (independent of that which characterizes the metaphysical faculty)—and Generosity (independent of benevolence.) Not only are these four astonishing organs marked by Gall as representing original faculties, but the twenty organs which were afterwards retained by him are *differently* localized; so that, according to M. Lélut, from whom I borrow these details, "of those twenty organs there is scarcely one which occupies the place Gall finally assigned to it."†

Phrenologists should give prominence to this fact. They are bound not to pass it over. In every way it is important in the history of the doctrine. It may perhaps be satisfactorily explained; but until it be so explained, it must tell against them; and for the very reason which they incessantly advance as their claim to consideration, namely, that the several organs were

* Gall pays his tribute to Niklas in the first edition of the *Anat. et Phys. du Système Nerveux*, i. preface xv. In the second edition this tribute is omitted; not very creditably.

† Lélut: *Réjet de l'Organologie Phrénologique*, 1843, p. 29.

established by *observation*, not by any theory.* For, if the doctrine had been established by a mingling of hypothesis and observation, nothing would be more likely than that the first sketch of it would be immature in conception, and uncertain in details; whereas, if the doctrine grew up slowly from a gradual accumulation of rigorously verified facts, these facts would remain constant through all the tentative changes of doctrine. Gall had been twenty years collecting facts of correspondence between external configuration and peculiarities of character. He had controlled these observations by repeated verifications. Prisons, lunatic asylums, busts, portraits, remarkable men, even animals, had furnished him with facts. Unless these facts really deserve all the credit which is demanded for them, Phrenology has the ground cut from under it; and if we are to give them our confidence, upon what ground can we relinquish it in favor of subsequent facts, which deny all that has been said before? If Gall could be deceived after twenty years of observation of facts which, according to his statement, are very easily observed, because very obvious in their characters, why may he not have been equally deceived in subsequent observations? If one collection of facts forced him to assign the organ of poetry to a particular spot (on the skull marked by him for M. Villers), how came another collection of facts to displace poetry, and substitute benevolence on that spot? Are the manifestations of poetry and benevolence so closely allied as to mislead the observer?

Probably Spurzheim's assistance came at the right moment to rectify many of the hazardous psychological statements, and to marshal the facts in better order. Together they made a tour through Germany and Switzerland, diffusing the knowledge of their doctrine, and everywhere collecting fresh facts. On the 30th of October, 1806, they entered Paris. In 1808 they pre-

* "On voit par la marche de ces recherches que le premier pas fut fait par la découverte de quelques organes; que ce n'est que graduellement que nous avons fait parler les faits pour en déduire les principes généraux, et que c'est subséquemment et à la fin que nous avons appris à connaître la structure du cerveau."—*Anat. et Phys.* i. preface xviii.

sented to the Institute their *Mémoire on the Anatomy and Physiology of the Nervous System in general, and of the Brain in particular*; and in 1810 appeared the first volume of their great work, under the same title, which work was remodelled in 1823, and published in six volumes, octavo, under the title of *Fonctions du Cerveau*.

In 1813 Gall and Spurzheim quarrelled and separated. Spurzheim came to England, Gall remained in Paris, where he died on the 22d of August, 1828. At the post-mortem examination, his skull was found to be of at least twice the usual thickness,—a fact which has been the source of abundant witticisms, for the most part feeble. A small tumor was also found in his cerebellum: “a fact of some interest, from that being the portion of the brain in which he had placed the organ of amateness, a propensity which had always been very strongly marked in him.”* I know not in what sense the writer just quoted thinks the fact so remarkable. Tumors in other organs are not usually the indications of increased activity; nor are we accustomed to find great poets with tumors in the organ of “imagination;” great artists with tumors in the perceptive region; great philanthropists with tumors on the frontal arch; great rebels with tumors behind their ears.†

§ II. GALL'S HISTORICAL POSITION.

The day for ridiculing Gall has gone by. Every impartial competent thinker, whether accepting or rejecting Phrenology, is aware of the immense services Gall has rendered to Physiology and Psychology, both by his valuable discoveries, and by his bold, if questionable, hypotheses. He revolutionized Physiology by his method of dissecting the brain, and by his bold assignment

* *The English Cyclopædia*, vol. iii., *Art. Gall*.

† To anticipate the reply that the existence of disease in the organ would provoke unusual activity of the organ, it is only necessary to state that Gall's “propensity” is not said to have been called into unusual activity shortly before his death, but to have always been very active. Had there been a casual connection between the disease and the activity, increase of the activity would have followed the rapid progress of the disease.

of definite functions to definite organs. To verify or refute his hypotheses, vast researches were undertaken; the nervous system of animals was explored with new and passionate zeal; and now there is no physiologist who openly denies that mental phenomena are directly connected with nervous structure; while even Metaphysicians are beginning to understand the Mechanism of the Senses, and the general laws of nervous action. The time has arrived in which it seems almost as absurd to theorize on mental phenomena in defiance of physiological laws, as it would be to adopt Stahl's advice, and consider anatomical and chemical researches futile in the study of Medicine. We owe this mainly to the influence of Gall. He first brought into requisite prominence the principle of the necessary relation between organ and function. Others had proclaimed the principle incidentally; he made it paramount by constant illustration, by showing it in detail, by teaching that every variation in the organ must necessarily bring about a corresponding variation in the function. He did not say mind was the *product* of organization: "Nous ne confondons pas les conditions avec les causes efficientes;" all he asserted was the correspondence between the state of the organ and its manifestations.* This was at once to call the attention of Europe to the marvellous apparatus of organs, which had previously been so little studied, except from a purely anatomical view, that no one, until Sömmerring (who was Gall's contemporary), had observed the relation between size of the brain and intellectual power, as a tolerably constant fact in the animal kingdom. This one detail is sufficient to make every reader suspect the chaotic condition of Physiological Psychology when Gall appeared.

Nor has Gall's influence been less remarkable in the purely psychological direction. People are little aware how that influ-

* So also Spurzheim says: "Both Dr. Gall and I have always declared that we merely observe the effective and intellectual manifestations, and the organic conditions under which they take place; and that in using the word organs we only mean the organic parts by means of which the faculties of the mind become apparent, but not that these constitute the mind."—*Phrenology*, p. 16.

ence is diffused, even through the writings of the opponents of Phrenology, and has percolated down to the most ordinary intelligences. "Ni les vains efforts d'un despotisme énergique," says Auguste Comte, "secondés par la honteuse condescendance de quelques savans fort accrédités, ni les sarcasmes éphémères de l'esprit littéraire et métaphysique, ni même la frivole irrationalité de la plupart des essais tentés par les imitateurs de Gall, n'ont pu empêcher pendant les trente dernières années l'accroissement rapide et continu, dans toutes les parties du monde savant, du nouveau système d'études de l'homme intellectuel et moral. A quels autres signes voudrait-on reconnaître le succès progressif d'une heureuse révolution philosophique ?"*

Gall may be said to have definitively settled the dispute between the partisans of innate ideas and the partisans of Sensationalism, by establishing the connate tendencies, both affective and intellectual, which belong to the organic structure of man. Two psychological facts, familiar from all time to the ordinary understanding, but shrouded from all time in the perplexities of philosophy, were by Gall made the basis of a doctrine. The first of these facts is, that all the fundamental tendencies are connate, and can no more be created by precept and education than they can be abolished by denunciation and punishment. The second fact is, that man's various faculties are essentially distinct and independent, although intimately connected with each other. What followed? That the Mind consists of a plurality of functions, consequently must have a plurality of organs, became the necessary corollary of this second proposition, as soon as the relation between organ and function was steadily conceived.

These two propositions have entered into the body of all European doctrines, although the corollary from the second is still vehemently disputed by many. No man of any intellectual eminence would now repeat Johnson's celebrated assertion of the poetic faculty being simply intellectual activity in a special di

* *Cours de Philos. Positive*, iii. 766.

rection, whereby Newton might have written *Othello*, and Shakespeare the *Principia*, had either of these great men set themselves the task. "Sir, a man can walk as far east as he can walk west," was thought a conclusive illustration; which indeed it was, when the "unity" of the faculties found no contradiction; but which no one would now accept as more than a fallacious analogy.

Another conception systematized by Gall has also passed into general acceptance, namely, the pre-eminence of the affective faculties over the intellectual; and the subdivision of the affective faculties into propensities and sentiments, and of the intellectual faculties into percepts and reflectives; thus marking the progress in development from the individual to the social, from the sensuous to the intellectual, which constitutes the great progress of civilization in the triumph of sociality over animality.

§ III. CRANIOSCOPY.

Phrenology has two distinct aspects. It is a doctrine of Psychology, and it is an Art of reading character. The scientific doctrine is based on the physiology of the nervous system, to which is added psychological analysis and classification. The Art is based on empirical observation of coincidences between certain configurations of the skull and certain mental phenomena. This latter is truly Cranioscopy, and is no more entitled to the name of a science, than are Physiognomy or Cheironomy; a point which Gall's successors have, with scarcely an exception, entirely overlooked. When therefore the phrenologists with much emphasis declare their system to be a system of "facts" and "observations," which claim our confidence because they are facts and not "mere theories," it is absolutely necessary that we should accurately discriminate in what sense these said facts are to be understood; because according to that sense will be the kind of confidence they will claim. If, for instance, they are presented purely as empirical facts—the observed coincidences between certain cranial appearances and corresponding mental

manifestations—we may thankfully accept them as valuable materials. Abundance of such material does exist; no one acquainted, even superficially, with phrenological writings will deny it. But without desiring to lessen the value of these facts by rigorous criticism of the evidence on which they rest, we may, nay more, we must, if our inquiry be regulated by scientific precision, treat them as we treat all other empirical facts, namely, hold them as mere sign-posts, until they be proved *universal*, and until they be bound together by some ascertained law. Now it will scarcely be denied that the observed correspondences between special cranial configuration and mental peculiarities, do, in many instances, fail. Large heads are sometimes observed in connection with very mediocre abilities; small heads, on the contrary, with very splendid abilities; particular “organs” do not always justify their prominence by the presence of the particular “faculties” which they are said to indicate. I wish rather to understate than overstate the difficulty, and I will not seek to gain any advantage by multiplying exceptions: it is enough for the present argument if any exceptions have been observed; because any exception to an empirical generalization is fatal to it as an empirical generalization, and can only be set aside when the generalization has ceased to be empirical, and has become scientific. Thus, I am aware that phrenologists explain each exception to their perfect satisfaction. But, in explaining it, they quit the sphere of empirical observation to enter that of science; and thus their explanation itself has only the validity which can be given it by theory. To make my meaning more definite, let us suppose that the empirical generalization of large chests being the cause of great muscular power, is under discussion. As an observed fact—an empirical fact—the correspondence of broad chests and muscular strength, is a valuable addition to our empirical knowledge. Taken as an indication, no one disputes the fact; but taken as a cause, and connected with a physiological theory, it bears quite a different value. The physiologist may say that the fact proves breadth

of chest to admit of more perfect oxygenation of the blood, and thus causes greater muscular power. Against such a theory we bring the fact that no absolute and constant relation between broad chests and muscular power exists; if we find large chests accompanying strength, we also find small chests in certain lithe, wiry frames accompanying even greater strength; the empirical generalization is thus destroyed, the explanation is shown to be imperfect, and the ratio of muscular power is shown to depend on some other condition besides the oxygenation of the blood.

When phrenologists explain away the exceptions to their empirical facts, they are on the field of pure science, and their explanations can only have value in proportion to the validity of the scientific principles invoked; and thus the Art of Cranioscopy is perpetually forced to recur to that very Physiology which the successors of Gall have so unwisely neglected, and of which (because it refuses its aid?) they often speak so contemptuously. The fact of a large head with a small mental capacity, or of a small head with a great mental capacity, is explained by them as resulting from the difference in the "temperaments" of the two. But have they discriminated the conditions thus vaguely indicated by the word temperament? Have they estimated the *proportions* in which the temperaments are mingled? Have they discovered a means of valuation by which the exact influence of each temperament can be estimated? They have not even made the attempt.

And yet that such a valuation is indispensable to the scientific precision of their results, must be evident to every one. What, strictly speaking, is this "temperament," which acts as a disturbing force in the calculation? I believe that science will one day show that it is the result of that law of *indeterminate* composition which distinguishes living tissue from all other substances. Inorganic bodies combine according to the law of *determinate* composition: the proportions of the constituent elements are fixed, definite, invariable. In water we invariably find 88.9 of oxygen, and 11.1 of hydrogen, in every 100 parts; never more,

never less; let the water be dew, rain, snow, or artificially produced in the laboratory, its composition is always determinate, even to the fraction. In any piece of flint every 100 parts will be composed of 48.2 of silicon and 51.8 of oxygen; never more, never less. But this is not the case with organic substances (those at least which we ventured to distinguish as *teleorganic* substances),* which are indeterminate in composition. Elementary analyses do not yield constant results, as do the analyses of inorganic substances. Nerve-tissue, for example, contains both phosphorus and water, as constituent elements; but the quantity of these elements *varies* within certain limits; some nerve-tissues have more phosphorus; some more water; and according to these variations in the composition will be the variations in the nervous force evolved. This is the reason why brains differ so enormously even when their volumes are equal. The brain differs at different ages, and in different individuals. Sometimes water constitutes three-fourths of the whole weight, sometimes four-fifths, and sometimes even seven-eighths. The phosphorus varies from 0.80 to 1.65, and 1.80; the cerebral fat varies from 3.45 to 5.30, and even 6.10. These facts will help to explain many of the striking exceptions to phrenological observations (such, for example, as the manifest superiority of some small brains over some large brains), and are, indeed, included within the comprehensive formula constantly advanced by phrenologists that "size is a measure of power, other things being equal." In this formula there is a truth, and an equivocal. The truth may be passed over by us, as claiming instantaneous assent. The equivocal must arrest us. Phrenologists forget that here "the other things" never *are* equal; and consequently their dictum,

* Matter is divided into Inorganic and Organic; in 1853 I proposed a modification of this division into—1. Anorganic; 2. Merorganic; and 3. Teleorganic: the first including those usually styled inorganic; the second including those substances in an intermediate state, either wanting some addition to become living, or having lost some elements, and passed from the vital state into that of product; the third including only the truly vital substances.

"size is a measure of power," is without application. There never is equality in the things compared, because two brains exactly similar in size, and external configuration, will nevertheless differ in elementary composition. The difference may be slight, but however slight, it materially affects the result. The difference of elementary composition brings with it a difference in *development*; and by development, I do not mean growth, but *differentiation*.* Parallel with these differences, not appreciable by any means in the phrenologist's power, there are psychological differences, resulting from the effect of education. So that to say "size is the measure of power," is as vague as to say "age is the measure of wisdom;" because, although it is true that size is an index of power, and, other things being equal, the greater the brain the greater the mental power, it is equally true, that age and experience in minds of equal capacity will produce proportionate wisdom: unfortunately we cannot get minds of equal capacity placed under the same conditions; and thus it happens that we find some men with large brains inferior to others with much smaller brains, and men of patriarchal length of years more unwise than their nephews.

And, in a less degree, this is true of size, taken as the measure of power, between one organ and another in the same brain. Failing utterly when two different brains are compared, the indication of size will be no more than *approximative* when two parts of the same brain are compared; although in this case the other things are necessarily more nearly equal: it is the same nerve-tissue, the same temperament we are dealing with. In a given brain, therefore, we may reasonably expect to find that any one organ which is larger in size than another, will be more powerful in function. But although this, as an empirical generalization, is a valuable indication, it is by no means *certain*, because there may be, and indeed usually is, a difficulty thrown in

* I have explained, at some length, the relation of growth and development in an article on *Dwarfs and Giants*, in *Frazer's Magazine* for August and September, 1856.

the way by the inappreciable yet potent differences of *development* which have taken place. Differentiations occur in two directions, in elementary composition and in morphological development. One brain may have more phosphorus than another; and in the same brain one organ may be vesicular or more fibrous than another. Thus it by no means follows that a man with reflective organs large in size, shall have so exercised these organs as to have brought their development into proportional advance; while on the other hand his smaller imaginative organs may have been so developed by culture and exercise, as to have placed them on a par in efficiency with the reflectives. Daily experience assures us that such is the case; and the philosophic phrenologist might point to it as one explanation of the many exceptions which Cranioscopy must necessarily encounter in its attempt to read character according to external indications.

This is not the place for an examination of Phrenology as an Art, or as a Science. I content myself, therefore, with the foregoing indication of what I believe to be the true position of Cranioscopy, and some of the difficulties which beset it. That the collection of observed correspondences between certain configurations of the skull and certain mental characteristics, is a worthy task, and one which must materially aid the science of Psychology, I do not think would be denied by any philosopher, if it were undertaken with that subsidiary aim; but when phrenologists obtrude their "system" on the notice of philosophers, declaring it to be a completed science of Psychology, and a true method of reading character, they must not be surprised if contradiction meet them on all sides, and if this contradiction often speak the language of contempt: since daily experience cannot sanction the present pretensions of the Art, because the Art is found to be constantly at fault; nor can psychologists recognize the pretensions of the Science.

§ IV. PHRENOLOGY AS A SCIENCE.

To defend their Art, phrenologists are compelled to recur to their Doctrine, founded on the physiology of the nervous system, and on a psychological classification of the faculties. Indeed, while on the one hand we find every phrenologist since Gall, Spurzheim, and Vimont, occupied entirely with Cranioscopy, and many even speaking with disdain of anatomists and physiologists; on the other hand we find them anxious to bring forward physiological and pathological evidence, whenever that evidence favors their views; and we hear them confidently assert that Phrenology is the only true Physiology of the nervous system. This latter assertion I am quite willing to echo, if the terms be somewhat modified, and the phrase run thus: "Phrenology aspires to be the true Physiology of the nervous system; when that Physiology is complete, Phrenology will be complete." But for the present we find Physiology confessing its incompleteness—confessing itself in its infancy; whereas Phrenology claims to be complete, equipped, full-statured! Rightly considered, that very claim is a condemnation of Phrenology, as at present understood. The pretension of being a perfect or nearly perfect system, surely implies a profound ignorance of the subject, an entire misconception of the complexity of the problem it pretends to have solved. At a time when Science is unable to solve the problem of three gravitating bodies, phrenologists pretend to find no difficulty in calculating the result of forces so complex as those which constitute character: at a time when the nervous system is confessed, by all who have studied it, to be extremely ill-understood, the functions of that system are supposed to be established; at a time when Physiology is so rapidly advancing that every decade renders most books antiquated, a Psychology professedly founded on that advancing science remains immovable!

Gall was on the right path when he entitled his first great work *Anatomy and Physiology of the Nervous System*.* His

* "Quiconque," he says, "est convaincu que la structure des parties du

successors have quitted that path. In spite of his emphatic declarations, when he was engaged in his exposition of the anatomy and physiology of the nervous system,* declarations of the necessity there was always to make the study of organ and function go hand in hand, so that he would only have his labors regarded "as the basis of an essay towards a more perfect work;" in spite, we say, of every philosophical consideration, his successors have neglected Physiology for Cranioscopy; not one of them has made or attempted to make any discovery or extension of discovery in the direction Gall so successfully opened; and the result of this neglect has been twofold—first, that since Gall and Spurzheim, Phrenology has not taken a single step; second, that all the eminent physiologists of Europe who have devoted themselves to the study of the nervous system, unanimously reject a theory which does not keep pace with the advance of science. It is very easy for phrenologists to disregard the unanimous opposition of physiologists, and to place this opposition to the account of prejudice, or the "not having sufficiently studied Phrenology;" but an impartial on-looker sees clearly enough that, making every allowance for prejudice, the opposition rests mainly on the discrepancy between the facts stated by phrenologists and the facts which Science has hitherto registered. Had phrenologists kept themselves acquainted with what was gradually being discovered by physiologists, they would have seen that something more than prejudice must be at work when all the eminent neurologists, such as Serres, Flourens, Majendie, Leuret, Longet, Lélut, Lafargue, Bouillaud, Baillarger, Müller, Valentin, and comparative anatomists such as Owen, declare against Phrenology; although every one of these is ready to admit the importance of Gall's method of dissection, ready to incorporate whatever results Gall arrived at, which can be in any

cerveau a un rapport nécessaire et immédiat avec leurs fonctions, trouvera qu'il est naturel de réunir ces deux objets l'un à l'autre, en les considérant et en les traitant comme un seul et même corps de doctrine."—*An. et Phys.*, pref. xxv.

* Compare his *Anat. et Phys. du Syst. Nerveux*, i. 95 and 271.

way confirmed. I do not blame phrenologists for having rendered no assistance to Physiology by their own labors; but I am forced to point out the historical consequences of their having neglected to follow the path commenced by Gall, and deviated into that of simple Craniology. The neglect of which they complain, is entirely owing to their presenting a rude sketch as a perfect science, and to their keeping behind the science of their day, instead of on a level with it. Impatient of contradiction, they shut their eyes to difficulties; unable to accommodate their principles to the principles of Physiology, they contemptuously dismiss objections as "merely theoretical," and fall back upon their "well-established facts."

Gall undertook a gigantic task. He produced a revolution, and his name will always live in the history of Science. It is idle to attempt to undervalue his work by citing his predecessors. Others before him had thought of localizing the different faculties in different parts of the brain. He and Spurzheim have mentioned such predecessors.* These, however, are very vague, unfertile conceptions; they in no way lessen Gall's originality. A nearer approach is to be read in Prochaska, whom Gall often mentions, although he does not, I think, mention this particular anticipation. It is the third section of chapter five, and is entitled, "Do each of the divisions of the intellect occupy a separate portion of the brain?" and it concludes thus: "It is by no means improbable that each division of the intellect has its allotted organ in the brain, so that there is one for the perceptions, another for the understanding, probably others also for the will and imagination and memory, which act wonderfully in concert and mutually excite each other to action. The organ of imagination, however, amongst the rest will be far apart from the organ of perceptions."† How far this general supposition of a

* *Fonctions du Cerveau*, ii. 350 sq. Compare also Lélut: *Rejet de l'Organologia*, p. 21 sq., and Prochaska, p. 374 sq.

† Prochaska, p. 447. There is a remarkable passage, too long for quotation here, in Willis's *Cerebri Anatome*, c. x. p. 125, on the convolutions as indi

"probability" is from Gall's specific attempt to localize the organs, need not be pointed out. The attempt was far from being fully successful; but, as a tentative, it was truly philosophical, and produced a revolution.

Having once conceived the brain to be an apparatus of organs, not a single organ, the problem was to analyze this apparatus into its constituent organs, and to assign to each its special function. In this difficult problem Gall, by the necessities of his position as a system-founder, was forced to proceed on a false method, namely, that of determining the separate organs according to a purely physiological and superficial analysis, instead of subordinating this analysis to anatomical verification. It is this arbitrary and unscientific proceeding which has made all anatomists reject the system. What would he have said to a physiologist who, knowing that the liver formed bile and sugar, should have assigned the function of bile-formation to one lobe, and the function of sugar-formation to another lobe, no structural differences having been observed? or who should assign to the different lobules of the kidney functions as different as are assigned to the different convolutions of the brain? It is perfectly true that from inspection of an organ no idea of its function can be obtained; and this truth has blinded phrenologists who are not physiologists to the necessity of nevertheless always making anatomy the basis of every physiological analysis. No inspection of the alimentary canal could disclose to us that its function was that of digestion. Nevertheless the function of digestion, except in the crude conception of ordinary men, is only intelligible after a rigorous analysis of the several processes, buccal, stomachal, and intestinal; for the intelligence of each of which, we must assign to each gland its specific secretion, and to each secretion its specific action: a physiologist who should attempt the explanation of digestion on any other mode would justly be slighted by every

eating intellectual superiority. I give only the opening; "*Plicæ sunt convolutiones cerebri longè plures ac majores in homine sunt quàm in quovis alio animali, nempe propter varios et multiplices facultatum superiorum actus.*"

good biologist in Europe. If Phrenology is the Physiology of the nervous system, it must give up Gall's approximative method for a method more rigorously scientific; and as Auguste Comte justly remarks, phrenologists, before they can take rank among men of science, must "reprendre, par une série directe de travaux anatomiques, l'analyse fondamentale de l'appareil cérébral, en faisant provisoirement abstraction de toute idée de fonctions."*

One of the fundamental questions which must be answered by this anatomical analysis, is that which no phrenologist condescends to ask, namely, Are the convolutions the seat of intelligence? in other words, Is the gray vesicular matter which forms the surface of the brain, the sole and specific seat of those changes on which all mental phenomena depend? This is a question which Crani-oscropy may ignore, since the facts on which Cranioscropy is founded are little if at all affected by it. To Phrenology the question is initial, all-important; because if the "Physiology of the nervous system" should turn out defective in its basis, the whole scaffolding will have to be erected anew. I put the question in two forms, because although it is commonly said that the convolutions of the brain form the organs, yet as many animals are altogether without convolutions, the vesicular surface, whether convoluted or not, must be understood as the seat of mental changes; the convolutions being only a mode of increasing the surface.

As the space at my disposal is inadequate to any exhaustive discussion of this important question, the reader will be satisfied with a brief indication of the doubt which Physiology forces me to express respecting the convolutions as the specific seat of mental manifestations. I cannot reconcile the current opinion on that subject with anatomical and zoological facts. I believe that the vesicular matter which constitutes the convolutions, is only one factor in the sum; it would, however, lead me too far to enter on the discussion, which might be objected to as at present only hypothetical.

* *Cours de Philosophie Positive*, iii. 821. Comte is much more favorable to Gall than I am, yet see his remarks on the multiplication of the faculties, p. 828 *sq.*

Quitting all hypothetical considerations for the less questionable evidence of facts, I find M. Baillarger*—who invented a new method of measuring the surfaces of brains, by dissecting out all the white substance from their interior, and then unfolding the exterior, and taking a cast of it—declaring from his measurements that it is far from true that in general the intelligence of different animals is in direct proportion to their respective extents of cerebral surface. If their absolute extents of surface be taken, the rule is manifestly untrue in many instances; and it is not more true if the extent of surface in proportion to the volume of the brain be regarded; for the human brain has less superficial extent in proportion to its volume than that of many inferior mammalia: its volume is two and a half times as great in proportion to its surface, as it is in the rabbit, for example.

Nor is this all. The researches of M. Camille Dareste† establish beyond dispute that the number and depth of the convolutions bear *no* direct relation to the development of intelligence; whereas they do bear a direct relation to the *size* of the animal; so that, given the size of the animal in any genus, he can predict the degree of convoluted development; or given the convolutions, he can predict the size: “toutes les espèces à cerveau lisse ont une petite taille; toutes les espèces à circonvolutions nombreuses et compliquées sont, au contraire, de grande taille.” Further, I am informed by Professor Owen that the grampus has convolutions deeper and more complicated than those of man. From all which facts it becomes evident that the phrenological basis is so far from being in accordance with the present state of our knowledge of the nervous system as to require complete revision.

Phrenology has another important point to determine, namely, the relation of the size of the brain to mental power. Is the size of the brain to be taken absolutely, and its functional activity in

* *Gazette Médicale*, 19 April, 1845. Paget: *Report on the Progress of Anatomy, in British and Foreign Med. Rev.* July, 1846.

† *Annales des Sciences Naturelles*, 3^e série, xvii. 80, and 4^e série, i. 73.

the purely mental direction to be measured by its absolute bulk ? A galvanic battery of fifty plates is five times as powerful as a battery of ten plates ; a cord of twenty threads is five times as strong as a cord of four threads, other things equal ; and, in like manner, we should expect that a brain of fifty ounces would be twice as powerful as one of twenty-five ounces (the limits are really greater than these). Nevertheless, we find no such absolute and constant relation between size and mental power as would justify the phrenological position ; the weight of the human brain being about three pounds ; the weight of the whale's brain being five pounds ; the weight of the elephant's between eight and ten pounds. If therefore the function of the brain be solely or mainly that of mental manifestation, and if size be the measure of power, the whale and the elephant ought to surpass man, as a Newton surpasses an idiot. If on the contrary the brain, as a nervous centre, has *other* functions besides that of mental manifestation, these discrepancies can be explained, although Phrenology must take these other functions into account.*

It is true that phrenologists have been aware of these discrepancies ; and, unable to admit the whale and elephant as superior to man, they have met the objection by saying the size must be estimated relatively, not absolutely. Compared with the weight of his body, the brain of man is certainly heavier than the brains of most animals, including the whale and the elephant ; and this fact seems to restore Phrenology to its cheerfulness on the subject ; but the fact does not hold good of monkeys, the smaller apes, many species of birds, and some rodents. This is the dilemma : either the ratio of mental power depends on the absolute size of the brain, and in this case the elephant will be thrice as intelligent as man ; or it depends on the relative size of the brain compared with the body, and in this case man will be less intelligent than a monkey or a rat, although more intelligent than

* I have sketched the relations of the brain to the body in the paper before referred to, on *Dwarfs and Giants*. See *Frazer's Mag.*, Sept. 1856, p. 289.

the elephant. Moreover, if *relative* size is the basis taken, phrenologists would be bound to compare in each case the weight of the brain with the weight of the body, before they could establish a conclusion; and *this* is obviously impracticable. I have stated the dilemma; but having stated it, I will add that although phrenologists attach importance to questions of weight of the brain, there seems to me a great fallacy involved in such estimates. Intelligence is not to be measured by the balance. Weight is no index of cerebral activity, nor of the *special directions* of the activity.

Enough has been said to show that Phrenology, so far from at present being the only true physiological explanation of the nervous system, is in so chaotic and unstable ■ position with respect to its basis, as to need thorough revision; and until some phrenologist shall arise who, following up the impulsion given by Gall, can once more place the doctrine on a level with the science of the age, all men of science must be expected to slight the pretensions of Phrenology as a psychological system, whatever it may hereafter become. That a new Gall will some day arise I have little doubt, for I am convinced that Psychology must be established on a physiological basis. Meanwhile, for the purposes of this History, it suffices to have indicated the nature of Gall's innovation, and the course of inquiry he opened. As a psychological classification, the one now adopted in Phrenology can only be regarded in the light of a tentative sketch; superior indeed to those which preceded it, but one which daily experience shows to be insufficient.

To conclude this chapter, we may point to Gall as having formed an epoch in the History of Philosophy by inaugurating a new Method. From the time when Philosophy itself became reduced to a question of Psychology, in order that a basis might, if possible, be laid, the efforts of men were variously directed, and all ended in skepticism and dissatisfaction, because a true psychological Method did not guide them. The history of the tentatives towards a true Method has been sketched in various chapters of this volume, and with Gall that Method may be said to have finally settled its fundamental principles.

ELEVENTH EPOCH.

PHILOSOPHY FINALLY RELINQUISHING ITS PLACE IN FAVOR OF POSITIVE SCIENCE.

CHAPTER I.

ECLECTICISM.

“Nous ne croyons pas les choses parce qu’elles sont vraies,” says Pascal, “mais nous les croyons vraies parce que nous les aimons.” This is one ever-present obstacle to the progress of mankind. We do not love truth because it is true, but because it seems to countenance other opinions which we believe necessary to our well-being. Only a few philosophic minds have strength enough to detach their eyes from consequences, and concentrate all their attention on Truth; and these few can only do so in virtue of their steadfast conviction that Truth can never be really injurious, whatever phantoms apprehensive ignorance may conjure up around it.

The reaction against the Philosophy of the eighteenth century was not a reaction against a doctrine proved to be incompetent, but against a doctrine believed to be the source of frightful immorality. The reaction was vigorous because it was animated by the horror which agitated Europe at the hideous excesses of the French Revolution. Associated in men’s minds with the saturnalia of the Terror, the philosophical opinions of Condillac, Diderot, and Cabanis were held responsible for the crimes of the Convention; and what might be true in those opinions was flung aside with what was false, without discrimination, without

analysis, in fierce impetuous disgust. Every opinion which had what was called "a taint of materialism," or seemed to point in that direction, was denounced as an opinion necessarily leading to the destruction of all Religion, Morality, and Government. Every opinion which seemed to point in the direction of spiritualism was eagerly welcomed, promulgated, and lauded; not because it was demonstrably true, but because it was supposed capable of preserving social order. And indeed when, looking back upon those times, we contemplate the misery and anarchy which disgraced what was an inevitable movement, and dimmed what was really noble in the movement, we can understand how generous hearts and minds, fluctuating in perplexity, did instinctively revolt not only against the Revolution, but against all the principles which were ever invoked by the revolutionists. Looking at the matter from this distance, we can see clearly enough that "materialism" had really no more to do with the Revolution than Christianity had to do with the hideous scenes in which the Anabaptists were actors; but we can understand how indelible was the association of Revolution and materialism in the minds of that generation.

So profoundly influential has this association been, that a celebrated surgeon of our own day perilled his position by advocating an opinion, now universally accepted, but then generally shuddered at; namely, that the brain is the "organ" of the mind. He had to retract that opinion, which the pious Hartley and many others had advanced without offence. He had to retract it, not because it was scientifically untenable, but because it was declared to be morally dangerous. It was "materialism," and materialism "led" to the destruction of all morality. Although every man now believes the brain to be veritably the organ of the mind, the word materialism is still used as a bugbear. Instead of being refuted as false, it is by many denounced as dangerous. I believe the philosophy of the eighteenth century to be dangerous because false; the writers to whom I allude declare it false because they believe it dangerous. I believe it

also to be in many respects healthful, because in many respects true; and it would be uncandid in me not to declare that if I oppose the eighteenth century doctrine, I believe the spiritualism which denounces it is even more incomplete as a philosophy, and consequently even more dangerous in its influence.

The history of the reaction in France is very instructive, but it would require more space than can here be given adequately to narrate the story.* Four streams of influence converged into one, all starting from the same source, namely, horror at the revolutionary excesses. The Catholics, with the great Joseph de Maistre and M. de Bonald at their head, appealed to the religious sentiments; the Royalists, with Chateaubriand and Madame de Staël, appealed to the monarchical and literary sentiments; the metaphysicians, with Laromiguière and Maine de Brian, and the moralists with Royer-Collard, one and all attacked the weak points of Sensationalism, and prepared the way for the enthusiastic reception of the Scotch and German philosophies. A glance at almost any of these writers will suffice to convince the student that their main purpose is to defend morality and order, which they believe to be necessarily imperilled by the philosophy they attack. The appeals to the prejudices and sentiments are abiding. Eloquence is made to supply the deficiencies of argument; emotion takes the place of demonstration. The hearer is charmed, roused, dazzled. He learns to associate all the nobler sentiments with spiritualistic doctrines, and all grovelling ideas with materialistic doctrines; till the one school becomes inseparably linked in his mind with emotions of reverence for whatever is lofty, profound, and noble, and the other with emotions of contempt for whatever is shallow and unworthy. The leaders of the reaction were men of splendid talents, and their work was eminently successful. But now that the heats of controversy have cooled, and all these debates have become historical, we

* The reader may consult on this topic Damiron, *Essai sur l'Histoire de la Philosophie en France au XIXième Siècle*; and Taine, *Les Philosophes Français du XIXième Siècle*.

who look at them from a distance can find in them no philosophical progress, no new elements added which could assist the evolution of Philosophy and form a broader basis for future monuments. In political and literary History these attempts would claim a conspicuous position; in the History of Philosophy they deserve mention only as having made mankind aware of the limited nature of the eighteenth century philosophy, and its extraordinary *lacunæ*. Their office was critical, and has been fulfilled.

One doctrine, and one alone, emerged from these attempts, and held for some time the position of a school. It made a noise in its day, but even the echoes have now become almost inaudible, for a feebler doctrine scarcely ever obtained acquiescence. We must, nevertheless, bestow a few sentences on it to make our history complete. Eclecticism is dead, but it produced some good results, if only by the impetus it gave to historical research, and by the confirmation it gave, in its very weakness, to the conclusion that an *à priori* solution of transcendental problems is impossible. For Eclecticism was the last product of philosophical speculation, the gathering together of all that philosophers had achieved, and the evolution from these separate achievements of one final doctrine, which final doctrine is itself rejected.

Victor Cousin and Thomas Jouffroy are the chiefs of this school, one a brilliant rhetorician utterly destitute of originality, the other a sincere thinker, whose merits have been thrown into the shade by his brilliant colleague. As a man of letters, M. Cousin deserves the respect which attends his name, if we except the more than questionable use which he has made of the labors of pupils and assistants without acknowledgment. However, our business is not with Cousin, but with Eclecticism. Royer-Collard introduced the principles of the Scotch school, to combat with them the principles of sensationalism. Reid and Stewart were translated by Jouffroy, explained and developed by Royer-Collard, Jouffroy, and Cousin. The talents of these professors,

aided by the tendency towards any reaction, made the Scotch philosophy dominant in France. But Victor Cousin's restless activity led him to the study of Kant:—and the doctrines of the “Königsberg sage” were preached by him with the same ardor as that which he had formerly devoted to the Scotch. As soon as the Parisians began to know something of Kant, M. Cousin started off to Alexandria for a doctrine: he found one in Proclus. He edited Proclus; lectured on him; borrowed some of his ideas, and would have set him on the throne of Philosophy, had the public been willing. A trip to Germany in 1824 made him acquainted with the modern Proclus—Hegel. On his return to Paris he presented the public with as much of Hegel's doctrines as he could understand. His celebrated Eclecticism is nothing but a misconception of Hegel's *History of Philosophy*, fenced round with several plausible arguments.

All error, M. Cousin repeatedly enforces, is nothing but “an incomplete view of the truth.” Upon this definition is based the proposition that “All systems are incomplete views of the reality, set up for complete images of the reality.” The conclusion is obvious: “All systems containing a mixture of truth and error have only to be brought together, and then the error would be eliminated by the mere juxtaposition of system with system. The truth or portion of the truth which is in one system would be assimilated with the portions of the truth which are in other systems; and thus the work would be easy enough.”

Eclecticism, therefore, means the bringing together of all discovered truths eliminated from their accompanying errors; and out of this body of truths a doctrine is to be elaborated. A great task; but is it practicable? The system is based on the definition of error; by that it must stand or fall.

The definition appears to us altogether untenable. Error is *sometimes* an incomplete view of the truth; but it is not *always*: it is sometimes no view of the truth at all, but a mere divergence from it. When Newton constructed his theory of the laws of attraction, and interposed an ether as the *medium* through which

they operated, he had an incomplete view of the truth. But when Descartes developed his theory of vortices, he was quite wide of the truth—he was altogether wrong. The phrase “incomplete view” is indeed so vague, that men who sport with verbal subtleties may justify the theory of Descartes as an incomplete view of the truth; a *very* incomplete view. At any rate no one will be disposed to assert that by the mere juxtaposition of Newton’s doctrine with that of Descartes he could in any way eliminate the error that is in both.

If therefore *all* systems are not incomplete views of the reality—if all systems do not contain certain portions of the truth—how is the eclectic to decide *which* systems are available for his purpose, which philosophies are to be juxtaposed? This leads to the necessity of a *criterium*. M. Jouffroy tells us that it is an easy matter. We have only to collect all the systems which have ever been produced, have them translated and arranged in their legitimate order, and the truths discovered by each will become organized in one doctrine.

Without stopping to ask what *is* the legitimate order, and how we are to know it, the student is naturally anxious to learn by what criterium Eclecticism proposes to judge and separate truth from error in any system. The inquiry is pertinent. It is easy to bid us be careful in separating the wheat from the chaff, that we may garner it up in the storehouses of the world. Suppose the farmer does not *know* the wheat when he sees it, what criterium do you give him whereby he may judge wheat to be wheat, not chaff? None. The philosopher can only distinguish the truth in two ways: either he knows it already, and then he *has* what he is seeking; or else he knows it by its relation to and accordance with those truths which he is already in possession of. That is to say, he has a criterium in his System: those views which range under it, he accepts as extensions of his knowledge; those which range beyond its limits, he denies to be true.

Suppose the eclectic places in juxtaposition the two great

schools which have always divided the world, viz. that which declares experience to be the source of all knowledge ; and that which declares we have a great deal of our knowledge antecedent to and independent of experience. Both of these systems he pronounces to be composed of truth and error. He assumes this ; for a little consideration might tell him that it is utterly impossible both should be correct : experience either is or is not the sole fountain of knowledge. The difference is as decided as that respecting the motion of the earth, or the motion of the sun. Ptolemy and Copernicus : choose between them ; any compromise is impossible, unless you wish to side with the Sizar who, when the question was put, "Does the earth move round the sun, or the sun round the earth ?" replied, "Sometimes one and sometimes the other." He was an eclectic apparently. Let us however for a moment grant that the two schools of Psychology are both partly right and partly wrong ; we then ask, What criterium has the eclectic whereby to distinguish error from truth ? He has none ; the doctors are silent on the point.

That men derive assistance from others, and that those who went before us discovered many truths, all admit. And there can be no doubt that a juxtaposition and comparison of various doctrines would be of service. Eclecticism, therefore, as a *subsidiary* process is valuable ; and has always been practised. M. Cousin however converts this subsidiary process into a primary one, and dignifies it with the attributes of a Method. In the one sense it is simply that the inquirer consults the works of his predecessors, and selects from them all that *he* considers true : viz. such portions as confirm, extend, and illustrate his previous opinions ; these opinions constituting his criterium. Let the reader reflect on the pertinacity with which men refuse to admit views which to others are self-evident, because those views are or seem to be opposed to religion, or the reigning doctrine, and he will clearly enough see the nature of this criterium. The history of opinion is crowded with instances of it. M. Cousin however does not so understand Eclecticism. He says we should admit all

systems as containing some truths; and these truths separate themselves from errors by the mere process of juxtaposition, somewhat in the manner, we presume, of chemical affinities.—A theory that needs, one would think, no further refutation than a simple statement of its principles.

Having dismissed Eclecticism as a Method, we need not waste time in examining M. Cousin's various and constantly shifting opinions. It is enough that he himself has relinquished them. It is enough that France and Europe reject them.

This final doctrine then fares no better than the doctrines which preceded it. Philosophy is still in search of its Method and its basis; and wearied out by so many fruitless efforts, it finally gives up the quest, and allows itself to be absorbed by Science. The dogmatic assertion of this position is to be found in Auguste Comte.

CHAPTER II.

AUGUSTE COMTE.

As I have devoted a whole volume to the exposition of Comte's philosophy,* it will be unnecessary to enter into a detailed exposition here; and the small space at disposal may be occupied with a general indication of his historical position and the nature of his Method.

In the course of this History one fact has been gradually assuming more and more distinctness, as the various failures to establish any solid basis for Philosophy have been brought before us: namely, that mankind has, from the origin of speculative inquiry, been pursuing a false Method. Gradually, as men became aware of this fact, they withdrew themselves more and more from Philosophy, and devoted their speculative energy to Science.

* *Comte's Philosophy of the Sciences*, 1853 (Bohn's Scientific Library, vol. 20).

Even those who, reluctant to relinquish the high aims of Philosophy, tried by changes of direction to discover new and more prosperous issues, and hoped in reinvestigating the nature of human knowledge to disclose some yet unsuspected path which might lead them to the goal, found Psychology itself forced to range beside the positive sciences, and to adopt the one Method which hitherto had alone been fruitful in results. And while from all directions a convergence towards Science was silently taking place, there arose a powerful thinker who proclaimed the inherent necessity of this convergence, and the necessity under which Philosophy now was of definitely relinquishing its ancient claims in favor of the positive Method, which could lead men to a general doctrine such as might once more establish harmony in their endeavors, and give to Europe an invigorating faith.

In the *Cours de Philosophie Positive*, 6 vols., 1830-42, Auguste Comte did for the nineteenth century what Bacon did for the seventeenth: he resumed in one vast work the various reforming tendencies of preceding ages. Whoever casts his glance at the present intellectual state of Europe, will perceive a great want of *unity*, caused by the absence of any one doctrine, *general* enough to embrace every variety of ideas, and *positive* enough to carry with it irresistible conviction. Look at the state of Religion:—Catholicism and Protestantism make one great division; but within the sphere of each we see numerous subdivisions; the variety of sects is daily increasing. Each Religion has remarkable men amongst its members; but each refuses to admit the doctrines of the others. There is, in fact, no one general doctrine capable of embracing Catholics, Protestants, Mohammedans, and their subdivisions. Look also at the state of Philosophy. There is no one system universally accepted; there are as many philosophies as there are speculative nations, almost as many as there are professors. The dogmas of Germany are held in England and Scotland as the dreams of alchemists; the Psychology of Scotland is laughed at in Germany, and neglected in England and France. Besides this general dissidence, we see,

in France and Germany at least, great opposition between Religion and Philosophy openly pronounced. This opposition is inevitable : it lies in the very nature of Philosophy ; and although, now as heretofore, many professors eagerly argue that the two are perfectly compatible and accordant, the discordance is, and always must be, apparent.

With respect to general doctrines, then, we find the state of Europe to be this : religions opposed to religions ; philosophies opposed to philosophies ; and Religion and Philosophy at war with each other. Such is the anarchy in the higher regions.

In the positive sciences there is less dissidence, but there is the same absence of any general doctrine ; each science is on a firm basis, and rapidly improves ; but a Philosophy of Science is nowhere to be found except in the work of M. Auguste Comte, which comes forward with the express purpose of supplying the deficiency. The *speciality* of most scientific men, and their incapacity of either producing or accepting general ideas, has long been a matter of complaint ; and this has been one great cause of the continuance of Philosophy : for men of speculative ability saw clearly enough that however exact each science might be in itself, it could only form a part of Philosophy. Moreover, the evil of speciality is not confined to neglecting the whole for the sake of the parts ; it affects the very highest condition of Science, namely, its capability of instructing and directing society.

In the early ages of speculation, general views were eagerly sought and easily obtained. As Science became rich and complex in materials, various divisions took place ; and one man cultivated one science, another man another. Even then general views were not absent. But as the tide rolled on, discovery succeeding discovery, and new tracts of inquiry leading to vast wildernesses of undiscovered truth, it became necessary for one man to devote himself only to a small fraction of a science, which he pursued, leaving to others the task of bringing his researches under their general head. Such a minute division of labor was

necessary for the successful prosecution of minute and laborious researches; but it ended in making men of science regard *only* the individual parts of science; the construction of general doctrines was left to philosophers. A fatal error; for such doctrines could only be truly constructed out of the materials of Science and upon the Method of Science; whereas the philosophers were ignorant of Science—or only superficially acquainted with it—and despised the Method. The *Natur-Philosophie* of Schelling and Hegel is a sufficiently striking example of the results of such a procedure.

We come then to this conclusion: in the present state of things the speculative domain is composed of two very different portions,—general ideas and positive sciences. The general ideas are powerless because they are not positive; the positive sciences are powerless because they are not general. The new Philosophy which, under the title of Positive, M. Comte proposes to create—and the basis of which he has himself laid—is destined to put an end to this anarchy, by presenting a doctrine which is *positive*, because elaborated from the sciences, and yet possessing all the desired *generality* of metaphysical doctrines, without possessing their vagueness, instability, and inapplicability.

Besides this general aim of the new “Great Instauration,” we have to notice three initial conceptions which Comte advances, two of which relate to Method, and one to History.

The first is the conception of Philosophy, which, in its widest sense, is identical with Science; consequently one Method must be followed in all investigations, whether the investigations relate to Physics, to Psychology, to Ethics, or to Politics. Every special science, no matter what its subject-matter, is but a branch of the one Positive Philosophy.

The second conception is that of Classification, whereby all the special sciences will assume their proper place in the hierarchy of Science, the simpler being studied first, and thus becoming instruments for the better prosecution of those which succeed. Thus Mathematics becomes the instrument of Astronomy

and Physics; Chemistry becomes the instrument of Biology, and Biology becomes the instrument of Sociology.

The third conception is that of the fundamental law of evolution. This conception sets forth that Humanity has three stages, the Theological, the Metaphysical, and the Positive. Whether we examine the history of nations, of individuals, or of special sciences, we find that speculation always commences with supernatural explanations, advances to metaphysical explanations, and finally reposes in positive explanations. The first is the necessary point of *départure* taken by human intelligence; the second is merely a stage of transition from the supernatural to the positive; and the third is the fixed and definite condition in which knowledge is alone capable of progressive development.

In the Theological stage, the mind regards all effects as the productions of supernatural agents, whose intervention is the *cause* of all the apparent anomalies and irregularities. Nature is animated by supernatural beings. Every unusual phenomenon is a sign of the pleasure or displeasure of some being adored and propitiated as a God. The lowest condition of this stage is that of the savages, viz. Fetichism. The highest condition is when one being is substituted for many, as the cause of all phenomena.

In the Metaphysical stage, which is only a modification of the former, but which is important as a transitional stage, the supernatural agents give place to abstract forces (personified abstractions) supposed to inhere in the various substances, and capable themselves of engendering phenomena. The highest condition of this stage is when all these forces are brought under one general force named Nature.

In the Positive stage, the mind, convinced of the futility of all inquiry into causes and essences, applies itself to the observation and classification of *laws* which regulate effects: that is to say, the invariable relations of succession and similitude which all things bear to each other. The highest condition of this stage would be, to be able to represent all phenomena as the various particulars of one general view.

Thus, in Astronomy we may trace the gradual evolution from Apollo and his chariot, through the Pythagorean ideas of Numbers, Harmonies, and so many other metaphysical abstractions, to the firm basis on which it is now settled: the law of gravitation. So that it is by geometry and dynamics we hope to wrest their secret from the spheres; not by the propitiation of a Sun-god. Thus also in Physics, where thunder was the intervention of Jove, and where Metaphysics had introduced Nature's "horror of a void," Science seeks the laws of gravitation, electricity, light, etc.

In the work already mentioned I have illustrated this law in many ways. The reader is advised however to seek in Comte's own volumes for a complete verification of the law, and its importance in all historical inquiry.* A few sentences will suffice to indicate the nature of the three stages:—All are agreed, in these days, that real knowledge must be founded on the observation of facts. But no science could have its origin in simple observation; for if, on the one hand, all positive theories must be founded on observation, so, on the other, it is equally necessary to have some sort of theory before we address ourselves to the task of steady observation. If, in contemplating phenomena, we do not connect them with some principle, it would not only be impossible for us to combine our isolated observations, and consequently to draw any benefit from them; but we should also be unable even to retain them, and most frequently the important facts would remain unperceived. We are consequently forced to theorize. A theory is necessary to observation, and a correct theory to correct observation.

This double necessity imposed upon the mind—of observation for the formation of a theory, and of a theory for the practice of observation—would have caused it to move in a circle, if nature had not fortunately provided an outlet in the spontaneous activ-

* This advice can the more easily be followed now that a translated condensation of the *Positive Philosophy* by Harriet Martineau, has placed the work within reach of English readers.

ity of the mind. This activity causes it to begin by assuming a cause, which it seeks out of nature, *i. e.* a supernatural cause. As man is conscious that he acts according as he wills, so he naturally concludes that every thing acts in accordance with some superior will. Hence Fetishism, which is nothing but the endowment of inanimate things with life and volition. This is the logical necessity for the supernatural stage: the mind commences with the unknowable; it has first to learn its impotence, to learn the limits of its range, before it can content itself with the knowable.

The metaphysical stage is equally important as the transitive stage. The supernatural and positive stages are so widely opposed that they require intermediate notions to bridge over the chasm. In substituting an *entity inseparable from phenomena* for a *supernatural agent, through whose will* these phenomena were produced, the mind became habituated to consider only the phenomena themselves. This was a most important condition. The result was, that the ideas of these metaphysical entities gradually faded, and were lost in the mere abstract names of the phenomena.

The positive stage was now possible. The mind having ceased to interpose either supernatural agents or metaphysical entities between the phenomena and their production, attended solely to the phenomena themselves. These it reduced to *laws*; in other words, it arranged them according to their invariable relations of similitude and succession. The search after essences and causes was renounced. The pretension to absolute knowledge was set aside. The discovery of laws became the great object of mankind.

Remember that although every branch of knowledge must pass through these three stages, in obedience to the law of evolution, nevertheless the progress is not strictly chronological. Some sciences are more rapid in their evolution than others; some individuals pass through these evolutions more quickly than others; so also of nations. The present intellectual anarchy re-

sults from that difference; some sciences being in the positive, some in the supernatural, and some in the metaphysical stage: and this is further to be subdivided into individual differences; for in a science which, on the whole, may fairly be admitted as being positive, there will be found some cultivators still in the metaphysical stage. Astronomy is now in so positive a condition, that we need nothing but the laws of dynamics and gravitation to explain all celestial phenomena; and this explanation we know to be correct, as far as any thing can be known, because we can predict the return of a comet with the nicest accuracy, or can enable the mariner to discover his latitude and find his way amidst the "waste of waters." This is a positive science. But so far is meteorology from such a condition, that prayers for dry or rainy weather are still offered up in churches; whereas if once the *laws* of these phenomena were traced, there would no more be prayers for rain than for the sun to rise at midnight. Remark also, that while in the present day no natural philosopher is unwise enough to busy himself with the attempt to discover the *cause* of attraction, thousands are busy in the attempt to discover the *cause* of life and the *essence* of mind. This difference characterizes positive and metaphysical sciences. The one is content with a general *fact*, that "attraction is directly as the mass and inversely as the square of the distance;" this being sufficient for all scientific purposes, because enabling us to predict with unerring certainty the results of that operation. The metaphysician or metaphysical physiologist, on the contrary, is more occupied with *guessing* at the causes of life, than in observing and classifying vital phenomena with a view to detect their laws of operation. First he guesses it to be what he calls a "vital principle"—a mysterious entity residing in the frame, and capable of engendering phenomena. He then proceeds to guess at the nature or essence of this principle, and pronounces it "electricity," or "nervous fluid," or "chemical affinity." Thus he heaps hypothesis upon hypothesis, and clouds the subject from his view.

The more closely we examine the present condition of the sciences, the more we shall be struck with the anarchy above indicated. We shall find one science (Physics) in a perfectly positive stage, another (Biology) in the metaphysical stage, a third (Sociology) in the supernatural stage. Nor is this all. The same varieties will be found to co-exist in the same individual mind. The same man who in Physics may be said to have arrived at the positive stage, and recognizes no other object of inquiry than the *laws* of phenomena, will be found still a slave to the metaphysical stage in Biology, and endeavoring to detect the *cause* of life; and so little emancipated from the supernatural stage in Sociology, that if you talk to him of the *possibility* of a science of history, or a social science, he will laugh at you as a "theorizer." The present condition of Science, therefore, exhibits three Methods instead of one: hence the anarchy. To remedy the evil all differences must cease: one Method must preside. Auguste Comte was the first to point out the fact, and to suggest the cure; and it will render his name immortal. So long as the supernatural explanation of phenomena was universally accepted, so long was there unity of thought, because one general principle was applied to *all* facts. The same may be said of the metaphysical stage, though in a less degree, because it was never universally accepted; it was in advance of the supernatural, but before it could attain universal recognition, the positive stage had already begun. When the positive Method is universally accepted—and the day we hope is not far distant, at least among the *élite* of humanity—then shall we again have unity of thought, then shall we again have one general doctrine, powerful because general. That the positive Method is the only Method adapted to human capacity, the only one on which truth can be found, is easily proved: on it alone can *prevision* of phenomena depend. Prevision is the characteristic and the test of knowledge. If we can predict certain results and if they occur as we predicted, then are we assured that our knowledge is correct. If the wind blows according to the will of Boreas, we may,

indeed, *propitiate* his favor, but we cannot *calculate* upon it. We can have no certain knowledge whether the wind will blow or not. If, on the other hand, it is subject to laws, like every thing else, once discover these laws, and men will predict concerning it as they predict concerning other matters. "Even the wind and rain," to use the language of one of our clearest writers, "which in common speech are the types of uncertainty and change, obey laws as fixed as those of the sun and moon; and already, as regards many parts of the earth, man can foretell them without fear of being deceived. He plans his voyages to suit the coming monsoons, and prepares against the floods of the rainy season."* If one other argument be needed, we would simply refer to the gradual and progressive improvement which has always taken place in every department of inquiry conducted upon the positive Method—and with a success in exact proportion to its rigorous employment of that Method—contrasted with the *circular* movement of Philosophy, which is just as far from a solution of any one of its problems as it was five thousand years ago; the only truths that it can be said to have acquired are a few psychological truths, and these it owes to the positive Method. So little has the Philosophy of Science been studied, that Comte's admirable classification of the fundamental sciences has not only been regarded as a merely ingenious speculation, but many writers have said that it was not different from other classifications which had been proposed, among which Hegel's has been mentioned. But the resemblance is only superficial. A few sentences must suffice here to indicate the principle on which it is based:—The problem to be solved is the dependence of the sciences upon each other. This dependence can only result from that of the corresponding phenomena. In considering these, it is easy to class them in a small number of natural categories, so disposed that the rational study of each successive category should be founded on the knowledge of the principal

* Dr. Arnott's *Elements of Physics*, fifth edition, vol. i. p. 18.

laws of the preceding category. The order of their dependence is determined by the degree of *simplicity* or *generality* of the phenomena. It is evident that the most simple phenomena—those which are least mixed up with others—are the most general; for that which is observed in the greatest number of circumstances is the most independent of the various particulars of those circumstances. The principle therefore to be adopted is this: we must commence with the study of the most simple or general phenomena, and proceed successively to the most complex and particular.

A distinction is to be made between the two classes of phenomena which are manifested by *inorganized bodies* and by *organized bodies*. The phenomena of the latter are obviously more *complex* than those of the former: they greatly depend upon inorganized bodies, while these in no way depend upon organized bodies. Organized bodies manifest *all* the phenomena of the inorganized, whether chemical or mechanical; but they *also* manifest the phenomena named *vital*, which are never manifested by inorganized bodies.

In the study of *inorganic Physics* we commence by separating the general phenomena of the universe from the less general terrestrial phenomena. Thus we have, first, *celestial Physics*, or Astronomy, whether geometrical or mechanical; secondly, *terrestrial Physics*. The phenomena of Astronomy being the most general, the most simple, and the most abstract of all, we must begin our study with them. Their laws influence all other terrestrial phenomena, of which they are essentially independent. In all terrestrial Physics universal gravitation is a condition; and so the simple movement of the body, if we would consider *all* the determining conditions, is a subject of greater *complexity* than any astronomical question.

Terrestrial Physics is also divided into two classes: Physics and Chemistry. Chemistry, rightly conceived, presupposes a knowledge of Physics: for all chemical phenomena are more complex than those of Physics, and depend on them in great part:

whereas they have no influence on physical phenomena. All chemical action is subject to the influence of weight, heat, etc., and must therefore be treated after them.

Organic Physics requires a similar division into Biology and Sociology. The phenomena relating to mankind are obviously more complex than those relating to the individual man, and depend upon them. In all social questions we see in operation the physiological laws of man; and we see also something peculiar, not physiological, which modifies the effects of these laws, and which results from the action of *individuals on each other*, curiously complicated by the action of each generation on its successor. It would be manifestly as impossible to treat the study of the collective species as a pure deduction from the study of the individual, as it would be to treat Physiology as a pure deduction from Chemistry.

The Positive Philosophy therefore resolves itself into five fundamental sciences, of which the succession is determined by a necessary and invariable subordination founded on a comparison of corresponding phenomena. The first (Astronomy) considers the most general, simple, and abstract phenomena—those farthest removed from humanity: they influence all others, but are not influenced by them. The last (Sociology) considers the most particular, complex, and concrete phenomena—those most directly interesting to man: they depend more or less upon all the preceding classes, without exercising on the latter the slightest influence. Between these two extremes the degrees of speciality and of complication of phenomena gradually augment according to their successive independence.

The foundation of a comprehensive Method is the great achievement of Comte, as it was of Bacon, and the influence he has exercised, and must continue to exercise, will be almost exclusively in that direction. Over his subsequent efforts to found a social doctrine, and to become the founder of a new religion, let us draw the veil. They are unfortunate attempts which remind us of Bacon's scientific investigations; and, in the minds of

many, these unfortunate attempts will create a prejudice against what is truly grand in his philosophic career. In the *Cours de Philosophie Positive* we have the grandest, because on the whole the truest, system which Philosophy has yet produced; nor should any differences, which must inevitably arise on points of detail, make us forget the greatness of the achievement and the debt we owe to the lonely thinker who wrought out this system.

CONCLUSION.

MODERN Philosophy opens with a Method; and ends with a Method; and in each case this method leads to positive Science, and sets Metaphysics aside. Within these limits we have witnessed various efforts to solve the problems of Philosophy; and all those efforts have ended in skepticism.

There are two characteristics of Modern Philosophy which may here be briefly touched on. The first is the progressive development of Science, which in ancient speculations occupied the subordinate rank, and which now occupies the highest. The second is the reproduction in Philosophy of all the questions which agitated the Greeks, which also pass through a similar course of development: not only are the questions similar, but their evolutions are so.

After the Eleatics had vexed the problems of Existence to no purpose, there came Democritus, Anaxagoras, Plato, and Aristotle, who endeavored to settle the problems of the nature and origin of human knowledge. So, in modern times, after Descartes and Spinoza, came Hobbes, Locke, Leibnitz, Reid, and Kant. The ancient researches into the origin of knowledge ended in the Skeptics, the Stoics, and the New Academy: that is to say, in Skepticism, Common Sense, and Skepticism again. The modern researches ended in Berkeley, Hume, Reid, and Kant: that is, in Idealism, Skepticism, Common Sense, and

Skepticism again. These inquiries terminating thus fruitlessly, a new and desperate spring was made in Alexandria: reason was given up for ecstasy; Philosophy merged itself in Religion. In Germany a similar spectacle presents itself: Schelling identified Philosophy with Religion. Thus has Philosophy completed its circle, and we are left in this nineteenth century precisely at the same point at which we were in the fifth.

Observe, however—and the fact is full of significance—how, in the course of speculation, those questions which were susceptible of *positive* treatment, gradually acquired strength and development. If we are as far removed from a solution of any ontological problem as we were in the days of Proclus, we are not nearly so ignorant of the laws of mental operation. Psychology is not a mature science yet; but it boasts of some indisputable truths. Although much remains to do, much also has been done; and whatever be the ultimate results of the new Method, it is satisfactory to feel that we have at least escaped from the vicious circle of verbal quibbling and logomachy, and are advancing on a straight road, every step bringing us nearer to positive knowledge, every addition being that of inalienable truth.

Modern philosophy staked its pretensions on the one question: *Have we any ideas independent of experience?* This was asking, in other words, *Have we any organon of Philosophy?*

The answer always ends in a negative. If any one, therefore, remain unshaken by the accumulated proofs this History affords of the impossibility of Philosophy, let him distinctly bear in mind that the first problem he must solve is, *Have we ideas independent of experience?* Let him solve that ere he begins to speculate.

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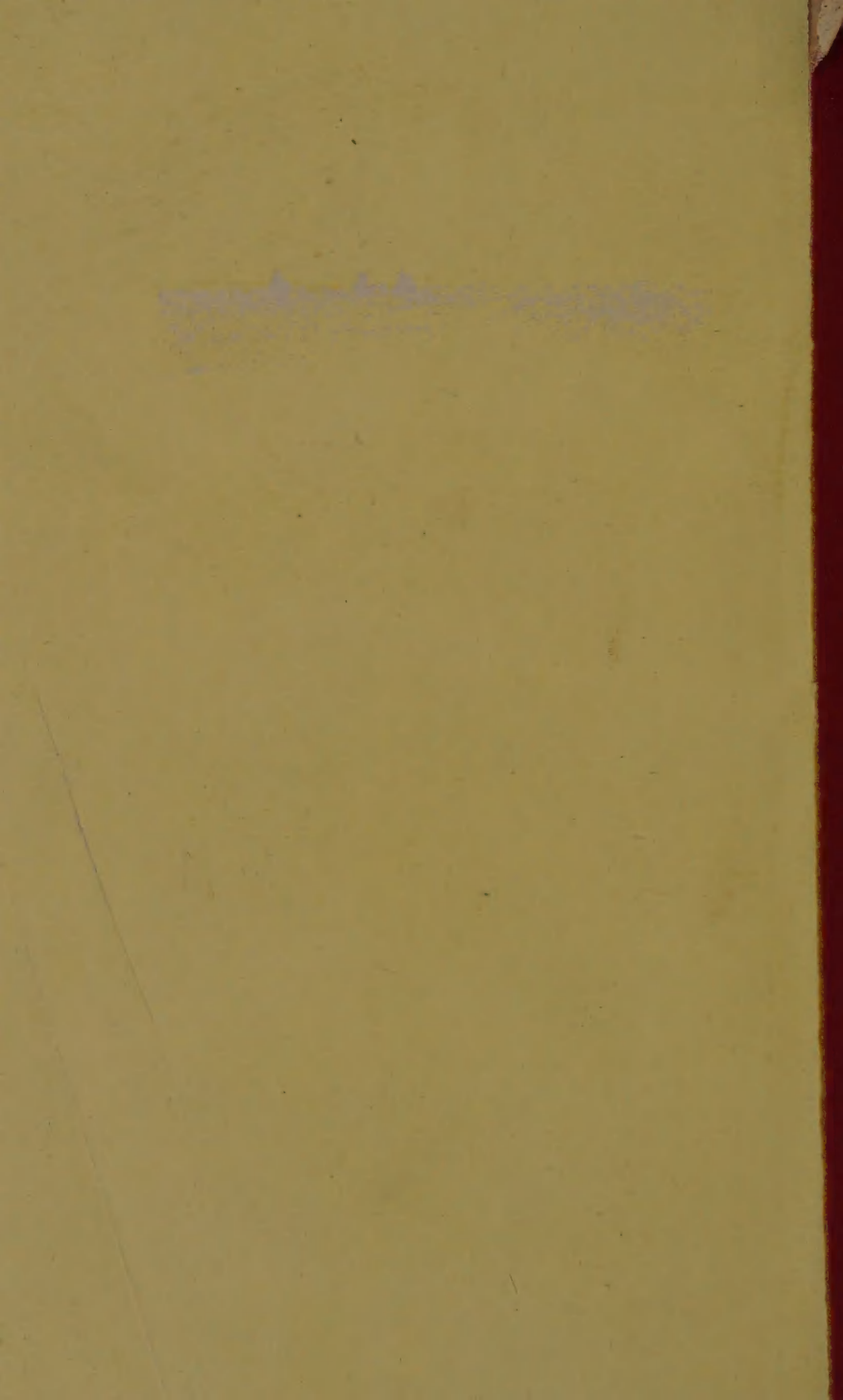
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